



Edible Cities Network – Integrating Edible City Solutions for social, resilient and sustainably productive Cities

Stakeholder power-interest maps

Stakeholder Analysis of ECS-initiatives in FRCs: A comparative case study for EdiCitNet

Deliverable D6.2



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Executive Summary

We have selected in existing ECS-initiatives located in the EdiCitNet Front-Runner Cities (FRCs), to gain insights into the operations of ECS-initiatives and into the importance of key actors and their stakes in the realization and continuity of ECS-initiatives and businesses.

We have analyzed the **differences and commonalities** of the ECS- initiatives and in their stakeholders' networks. Additionally, we have collected information about the ECS perception of the local ECS-related stakeholders' landscape, by mapping the position of each ECS in a **stakeholders' power-interest matrix**.

The information gathered in this document lies the foundations for supporting the development of ECSs' business models and for strengthening their continuity. These models are one of the main outcomes of the overall EdiCitNet project.

The information on the functioning underpinned the assumption that there exists a diversification of ECS initiatives. What they have in common is that the initiatives can be labelled under the heading of **social entrepreneurship**. The 'green' edible element is a vehicle for the entrepreneurs to contribute to the social impact of their initiative. Ultimately we were able to distinct preliminary a grouping of ECS initiatives i.e government-oriented, civil society oriented and commercially oriented ECS-initiatives

1. Research outline

In this chapter the objective of the research focusing on ECS-initiatives, its background and methodology is given. The chapter ends with an overview of the participating ECS-initiatives.

1.1. Objective

The majority of mankind now living in cities experience typical urban challenges (think of housing, climate, and food provision), raising total consumption above what our planet can carry, inevitably impacting ecological and food systems. To make a change for the better, citizen groups take grassroots initiatives, or are invited to partake in municipal projects, so as to strengthen social cohesion, and also locally mitigate climate change, and reclaim public spaces.

Initial enthusiasm and commitment cannot however conceal that many nature-based urban initiatives find it hard to survive and thrive. Having initially explored local potentials, attention of initiators shifts to safeguarding continuity of their ECS beyond the pilot phase. What are the typical activities, services and produce of ECS? How do ECS act on what is valuable to their core team, make their ambitions come true? The answers are expected to indicate stepping stones in promoting lasting, scalable, and/or replicable initiatives, to the benefit of more sustainable, livable and healthier cities around the world.

When an ECS evolves from a local novelty, via experiments to an organized activity with distinct user preferences, initiatives have to deal with established norms, routines, regulations, and market forces, representing vested positions (Raven, 2005) of stakeholders. Different stakeholders, at a specific moment in time and changing over the years, impact differently the realization and continuity of ECS-initiatives. Ultimately the overall EdiCitNet program is to support ECS-initiatives by presenting business models aimed at strengthening the continuity of the initiatives. The insights in the functioning of ECS-initiatives and the stakeholder mapping provide a base for a holistic approach in the 3 Layer Business Model Canvas (task 6.2), and it is the base for the EdiCitNet Business Consulting Team (D6.4) operating overarching in the EdiCitNet project. Here it is relevant to have robust information which gives a general insight on the distribution and motivation of the ECS which are either already partner or will be associated in the near future - to be part of a holistic economic support system developed in task 6.3.

The **objective** of this report to gain insights in:

- (1) the functioning of ECS-initiatives; and
- (2) the importance of key actors and their stakes in the realization and continuity of ECS-initiatives and businesses.

To gain such insights, the current report benefitted from stakeholder mappings of series of diverse ECS-initiatives in Front-Runner Cities (FRCs) in the EdiCitNet-project, to identify potential Edible City Solutions for market uptake. The stakeholder mappings indicate the variety of stakeholder engagement, be it as partner (or opponent) in realizing, using, and enabling the ECS. This stakeholder mapping is instrumental to the later specification of the so-called 3-Layered Business Model Canvas (3BMC). This report presents ECS-cases from the FRCs Rotterdam, Oslo, Andernach, Berlin and Havana.

1.2. Background

Global challenges, such as climate change, cause multi-faceted problems. But while turning to individual ECS, we should be aware of the need for inclusiveness, acknowledge stages of development, notice if ECS find lasting opportunity spaces, and learn how dominant (coalitions of) stakeholders impact the potential of ECS to succeed in fulfilling their ambitions.

First, ECS are local answers to global challenges. These so-called wicked problems can be characterized as never definitely solved (but temporarily resolved). As a consequence, the proposed 'solutions', such as ECS, are hard to test on effectivity, and lack clear indicators that show when the initiatives suffice. Wicked problems need inclusive approaches, where business, governments and so-called third sector actors collaborate, to achieve social and environmental goals.

Second, ECS may be considered radical innovations, as they are often incapable of competing promptly with or on existing markets. Radical innovations require a co-evolution of markets and the new initiatives. ECS-initiatives evolve through different stages from invention till being established and reproduced, the latter indicating that the ECS has diffused as innovation. Only then the initiative has become established. Initiators of ECS need so-called game players, willing to break away from the dominant product/technology-combinations (regimes), who open up established settings (cracks in regimes), providing opportunity to the new ECS (niches) to gain momentum, to survive and become established. Initiators and partners of an ECS are challenged as long as windows of opportunities are kept closed. Then protection and specific funding are likely needed to prevent early failure. Especially public authorities are said to be able to disrupt established regimes and stimulate niches, granting legitimacy to develop sustainable technologies, mobilizing innovation resources, and creating a willing environment (via exemptions, subsidies, etc.). Gradual alignment of technological designs, activities, and articulated demand, improve societal acceptance of innovations, stabilizing the initiative. To which extent emerging ECS-initiatives develop into embedded and accepted innovations remains to be studied.

Stakeholder analysis can increase our understanding of hostile or benign settings for ECS, by identifying who has a stake in local initiatives, and determining the influence of stakeholders in decisions. Stakeholders are defined as any groups or individuals who are affected by, and/or may impact a business. ECS seem to bring together diverse stakeholders that align their policies to attain superior outcomes. Partners in an ECS may have shared or different interests, and vary in the degree of commitment in pressing their specific ambitions (stakes) upon the joint ECS-initiative. A local initiative may even mould its stakeholders and their resources. Setting the objectives and organizing the activities of an ECS is ultimately based on the values and derived goals of key stakeholders. ECS-initiatives may need to perform socially, environmentally, and commercially, but their prioritization depends on the values and ambitions of (key) stakeholders in an ECS. In order to identify stakeholders, and their importance, we will go into the key aspects of the empirical study.

1.3. Methodology

Selection of ECS-initiatives

To enable gathering data, we first operationalized the definition of ECS, defined in Deliverable D6.1 as **organized initiatives (including SMEs) that grow goods or support its production, usually transferring related produce and services, and who, in a responsive manner, benefit from the short distance between its location and final users**. The typical ECS targeted for in this study have in common two features:

- the status concerning their potential to develop a trade-off with, or turn from an initiative into, a business based organisation, and
- the potential to up-scale activities, or replicate (international expansion) as locally working offsprings.

The selection of ECS-initiatives was done in two steps: (1) selection of (front runner) cities (FRC); (2) within the cities selecting the individual initiatives.

The EdiCitNet-project expects substantial learnings from ECS in **FRCs** being Rotterdam, Oslo, Andernach, Berlin and Havana. At city scale, Rotterdam counted over 200 ECS-initiatives, predominantly resource constrained, and often lacking stable prospects for continuity, although some initiatives seem successful in building commercial activities. ECS vary to the degree of using from simple (e.g., compost) to high-tech technologies (e.g., rooftop water retention). Relatively coherent, but overlapping groupings of ECS have emerged spontaneously, to pragmatically achieve joint benefits. Oslo aims to strengthen a network of actors in urban agriculture with a wide range of purposes, e.g. local food, education, social cohesion, inclusion, care and therapy. Oslo aims to foster equitability by enhancing opportunities to participate, have accessibility to resources, knowledge transfer, and market channels. Andernach since long is branding the city as 'Edible City'. The city grows vegetables and fruits in public green space and will foster user-friendly ECS at district scale, such as producing healthy food in the city, distributing it to public kitchens. Andernach is a small city with a frontrunner mentality when it comes to ECS, realizing many and diverse initiatives, supported by a very supportive municipality. In Andernach, a concept for an edible city initiated by the city administration is being implemented, which aims, among other things, to strengthen biodiversity and to bring the topic of food closer to broader population groups through educational work. This rather official way of implementation attracts many enthusiastic visitors every year. In Havana, more than half of the consumed food is grown organically on-site. Urban farmers in Havana use predominantly low-tech technologies and practices achieving high yields. Among the used technologies are drip irrigation, organoponics, regular addition of compost and other good horticultural practices (e.g. the use of well-adapted varieties, mixed cropping, crop rotation and integrated pest management). In the process, Havana has also become a pioneer in a worldwide transition to sustainable agriculture that produces 'more with less'. Berlin has a large history of ECS and the local government decided recently to become an Edible City. Many isolated and fragile ECS projects have been implemented, but there is a lack of systemic network structure and planning. Only a few ECS projects developed successful business models. Berlin aims to revive a deprived area through inclusive urban farming, aiming at raising social cohesion in an area that will be re-socialized and re-structured. The search for suited ECS resulted in 8 case studies in Rotterdam,

10 case studies in Oslo, 6 case studies in Andernach, 8 case studies in Berlin and 9 case studies in Havana. The surveys were executed in 2019.

The **individual ECS-initiatives** were selected based on the search criteria formulated in Deliverable 6.1., detailed a case study approach, and specified an interview protocol. The typical ECS in the EdiCitNet project concerns organized initiatives (including SMEs and startups) that grow goods, usually transferring related produce and services, and who, in a responsive manner, benefit from the short distance between its location and final users. Thus, we consider Edible City Solutions along the whole value chain of (peri) urban food production.

The three search criteria for ECS selection are:

1. **Maturity:** vary from a) recent initiatives, b) projects struggling for continuation, and c) mature, established initiatives.
2. **Orientations:** each ECS should at least voice two objectives from the triad People, Planet, Prosperity (PPP); one may call them social, environmental and economic objectives.
3. **Scale:** variety in the core team that feels responsible for ECS-continuity: a) micro (one person), b) small (approx. 2-4 persons); and c) substantial (larger core team). They may coordinate a varying number of volunteers.

Case studies

We use a multiple-case study approach to reflect the heterogeneous characters of ECS-initiatives worldwide. Thus, each of the cases may show unique characteristics within its functioning and their stakeholder network. Case studies were selected to bring about results from similar settings, and results from divergent cases.

Our case study approach involved different research methods, such as interviews, observation, and the study of documents. Ideally two persons of the EdiCitNet-team were involved in executing an interview at the location of the ECS, partaking in sightseeing, keeping eyes open for supportive or counterfactual observations. The interviews were semi-structured, to allow flexibility for the interviewee to share their knowledge and in depth insights, while taking care of getting answers to most if not all questions. This methodology enabled both on the spot and ex post discussions, leveraging learning for the comparative case study.

The interview protocol encompassed the following elements:

- (1) describing general characteristics such as activities, goals, number of people working on the ECS;
- (2) identifying prominent stakeholders;
- (3) stakeholder profiling;
- (4) stakeholders' interests and scope for action;
- (5) stakeholder power and power resources; and
- (6) the stakeholder interest-power map.

This list of elements builds on established literature (Ackermann & Eden, 2011¹) on how stakeholder management concepts can be applied by management teams. The specifics are in the Appendix; but a summary of each is provided in the following section, followed by the analysis across the total set.

¹ Ackermann, F., & Eden, C. (2011). Strategic management of stakeholders: theory and practice. *Long range planning*, 44(3), 179-196.

Analysis

The analysis is executed in line with the two objectives of this research.

To gain insight in the functioning of the ECS-initiatives, we evaluate and discuss the case information from the local initiatives of Oslo, Rotterdam, Andernach, Berlin and Havana concerning the following characteristics:

- **Governance:** the rules by which the ECS-initiative is directed in the sense of their objectives are set and pursued. A differentiation is made into: market driven, contract/project based, sponsoring requirements, (semi)public frame
- **Funding:** source of resources divided into: assigner/principal, (semi)public policy based, ad hoc funding
- **Duration:** length of estimated time of the duration of the initiative divided in undetermined (no limits set), determined by policy, determined by project duration, (un)determined by interest of buyers/clients.
- **Position initiator:** characterization of the initiator within the structure of the initiative within the context of the stakeholder network. A differentiation is made in: networker, partner, executive worker
- **Goal Orientation:** type of goal description divided into; commercial, specific principal's goal, public/societal
- **Enabling goal-oriented action:** dominant trigger of initiative's activities divided into societal ideals; market opportunities, specific principal's requirements, (semi)public goals
- **Members, stakeholders in the initiative** divided into (semi)public organization (being either sponsor, principal), volunteer (executing certain activities), supporter (taking responsibility for the initiative), executing employee, partner (in a collaboration)
- **Action mode:** type of action drivers divided into ideals, orders, procedures, sponsor requirements; and
- **Organization mode:** dominant organizational structure of the initiative within the context of stakeholders, divided in collaboration between partners within a chain, executive organization and movement (carried by citizens)

Learnings were taken from ECS-cases that differed according to their stage of development, differed in their social-environmental-business orientations, and differed in scale of activities (see the extensive tables in chapter 3).

The stakeholder analysis is done according to the figure below.

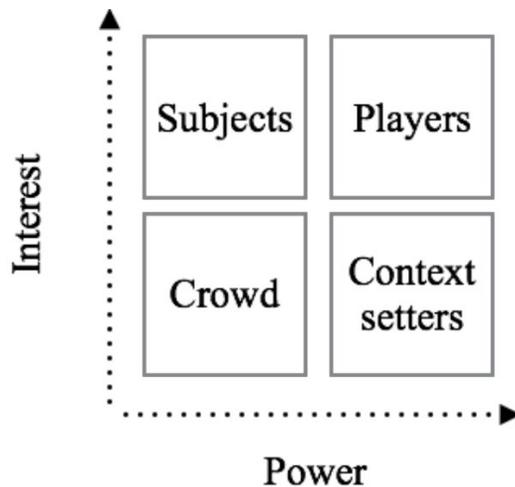


Figure 1: Stakeholder power- interest grid. Source: adapted from Ackermann & Eden (2011, p.183)

- **Power** is seen as a combination of the perspective of the initiator of the initiative on the power of the stakeholder and the goal of the activities (market, citizens, public); high (low) power indicates a strong (weak) potential to enforce the partial interest of the stakeholder upon the initiative.
- **Interest** is derived from the role of the stakeholders in combination with mode of organization: 'very positive' means intrinsically supportive of the goal of the initiative; 'neutral' means tolerating the initiative and/or cooperative in executing some tasks; 'very negative' means against the establishment of the project.

This map (Ackerman und Eden 2011) finally leads to recommendations, which are fixed in the description of the Ackerman and Eden Stakeholder Mapping grid, for example as to which stakeholders may better be repositioned to a position that is more beneficial to the ECS.

1.4 Participating ECS-initiatives

This section lists the studied ECS, as snapshots of a few lines each. A more elaborate overview of the cases, their stakeholders and other background information is provided in the Annexes to this deliverable.

Rotterdam ECS case studies

- Voedselbos (Food forest). Interview held on: 06/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).
- Voedseltuyn (Food garden). Interview: 17/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).
- Urban Agriculture - project development. Interview held on: 21/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).
- Natuurtalent (Natural Talent). Interview held on: 21/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).

- De Enk, garden for Nature & Environment education. Interview held on: 21/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).
- Rotterdamse Munt. Interview: 11/06/2019. Interviewers: Emiel Wubben; Geoffrey Hagelaar (WU).
- De Dakakker. Interview held on: 16/07/2019. Interviewer: Geoffrey Hagelaar (WU).
- Hofbogen. Interview held on: 16/06/2019. Interviewer: Geoffrey Hagelaar WU).

Oslo ECS case studies

- Linderud Manor. Interview held on: 19/06/2019. Interviewer and analysis: Lotte Liegmann (Nabolagshager).
- Tveten Community- supported agriculture (CSA). Interview held on: 23/08/2019. Interviewer and analysis: Laura Martinez (Nabolagshager).
- Lif Laga. Interview held on: 28/05/2019. Interviewer: Lotte Liegmann; Analysis: Laura Martinez (Nabolagshager).
- Oslo Living Lab. Interview held on: 28/05/2019. Interviewer and analysis: Lotte Liegmann (Nabolagshager).
- Herbanists. Interview held on: 26/06/2019. Interviewer and analysis: Laura Martinez (Nabolagshager).
- Onkel Trolls Spiskammer. Interview held on: 07/06/2019. Interviewer: Lotte Liegmann; Analysis: Laura Martinez (Nabolagshager).
- Gruten. Interview held on: 19/06/2019. Interviewer: Lotte Liegmann; Analysis: Laura Martinez (Nabolagshager).
- Tåsen Microgreens. Interview held on: 28/06/2019. Interviewer and analysis: Laura Martinez (Nabolagshager).
- Bybi. Interview held on: 20/06/2019. Interviewer: Lotte Liegmann; Analysis: Laura Martinez (Nabolagshager).
- Dr. Dedichens Drivhus. Interview held on: 05/06/2019. Interviewer: Lotte Liegmann; Analysis: Laura Martinez (Nabolagshager).

Andernach ECS case studies

The names of the ECS interviewed have been anonymized because several ECS did not want to have their data published, especially with regard to critical stakeholders. As the interviews examines existing companies in their economic activities and aims at real situation descriptions, which can only take place in a trustful atmosphere, it was decided to anonymise the ECS.

- ECS1 Interview held on: 21/11/2019. Interviewer: Thomas Wachtel, Suhana Reddy (UBER)
- ECS2 Interview held on: 06/11/2019. Interviewer: Thomas Wachtel (UBER)
- ECS3 Interview held on: 21/11/2019. Interviewer: Thomas Wachtel (UBER)
- ECS4 Interview held on: 07/11/2019. Interviewer: Thomas Wachtel (UBER)
- ECS5 Interview held on: 21/11/2019. Interviewer: Thomas Wachtel (UBER)
- ECS6 Interview held on: 16/11/2019. Interviewer: Thomas Wachtel (UBER)

Berlin ECS Case studies

The names of the ECS interviewed have been anonymized as agreed at the beginning of the interviews.

- ECS I Interview held on: 01/10/2019. Interviewer: Suhana Reddy, Thomas Wachtel, Ina Säumel (UBER)
- ECS II Interview held on: XX/10/2019. Interviewer: Suhana Reddy, Ina Säumel (UBER)
- ECS III Interview held on: 15/10/2019. Interviewer: Suhana Reddy, Thomas Wachtel, Ina Säumel (UBER)
- ECS IV Interview held on: 15/10/2019. Interviewer: Suhana Reddy, Ina Säumel (UBER)
- ECS V Interview held on: 25/09/2019. Interviewer: Suhana Reddy, Thomas Wachtel, Ina Säumel (UBER)
- ECS VI Interview held on: 15/10/2019. Interviewer: Suhana Reddy, Thomas Wachtel, Ina Säumel (UBER)
- ECS VII Interview held on: 18/11/2019. Interviewer: Ina Säumel (UBER)

Havana ECS case studies

The names of the ECS interviewed have been anonymized as agreed at the beginning of the interviews.

- ECS I Interview held on: 16/10/2019. Interviewer: Ina Säumel (UBER)
- ECS II Interview held on: 16/10/2019. Interviewer: Ina Säumel (UBER)
- ECS III Interview held on: 15/10/2019. Interviewer: Ina Säumel (UBER)
- ECS IV Interview held on: 15/10/2019. Interviewer: Ina Säumel (UBER)
- ECS V Interview held on: 15/10/2019. Interviewer: Ina Säumel (UBER)
- ECS VI Interview held on: 15/10/2019. Interviewer: Ina Säumel (UBER)
- ECS VII Interview held on: 17/10/2019. Interviewer: Ina Säumel (UBER)
- ECS VIII Interview held on: 17/10/2019. Interviewer: Ina Säumel (UBER)
- ECS IX Interview held on: 14/10/2019. Interviewer: Ina Säumel (UBER)

2. Results Case studies

In this chapter detailed overviews are given the data found presented on the bases of the characteristics of the initiatives and the stakeholder mapping as given in section 2.3. The overviews are presented per FRC.

2.1. Rotterdam

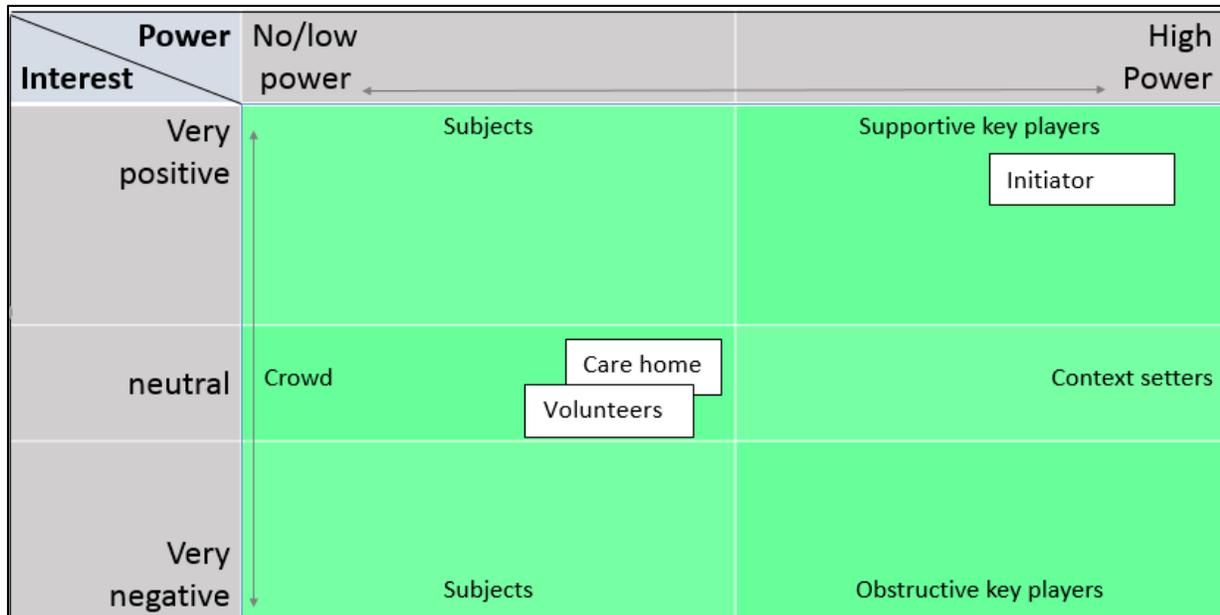
2.1.1. Stakeholder mapping

Food forest

Initiator: power of ideas and will to establish food forest throughout Rotterdam; interest very positive

Care home: power of space to establish food forest however the initiator sees enough other possibilities in Rotterdam to establish food forests so feels not dependent; interest is more general (not relating to food forests but having maintained green space and lively surroundings).

Volunteers: help in maintenance twice a year however initiator feels not dependent on specific volunteers; interest is more general i.e. doing some green activities.



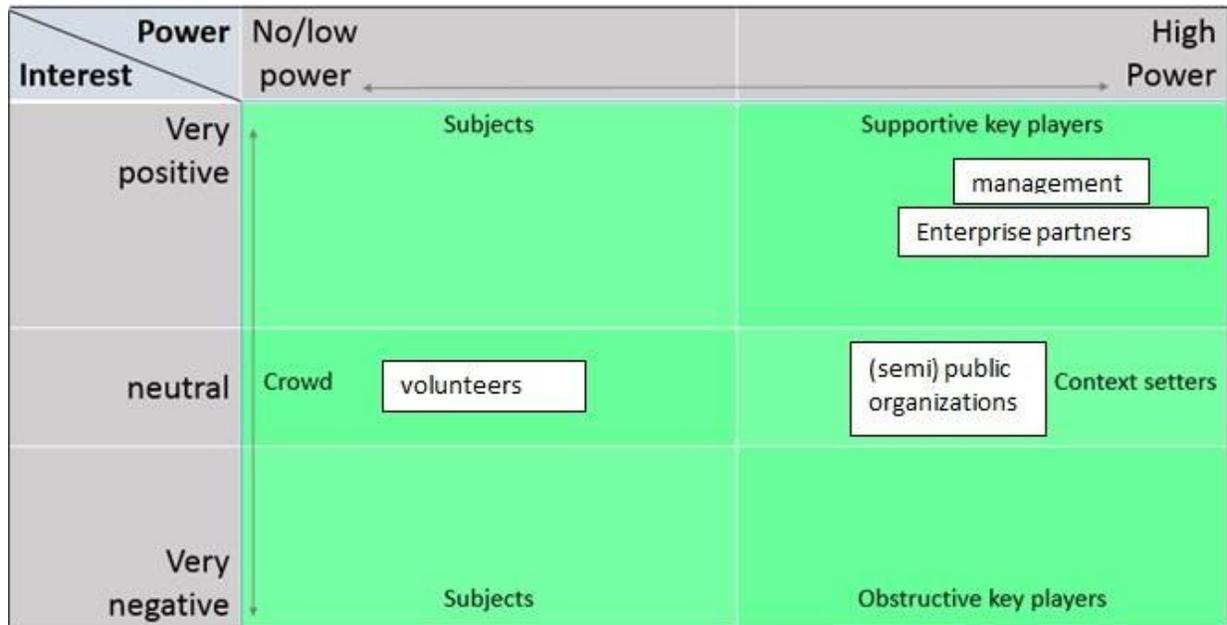
Food garden (Voedseltuin)

The management of Food Garden is the spin on the web relating to principals and partners; high on power and on interest.

(Semi)-public organizations: high on power being principals for services rendered by Food garden (no customers – no food garden); interest could be mentioned as neutral because the principals have other possibilities to purchase services;

Enterprise partners: high on power because of their interdependence to work together to have a stronger market position; interest high because of their shared common goal as partners;

Volunteers: low on power (others people can be found as volunteer) and low on interest (they are generally interested in doing activities related to green).

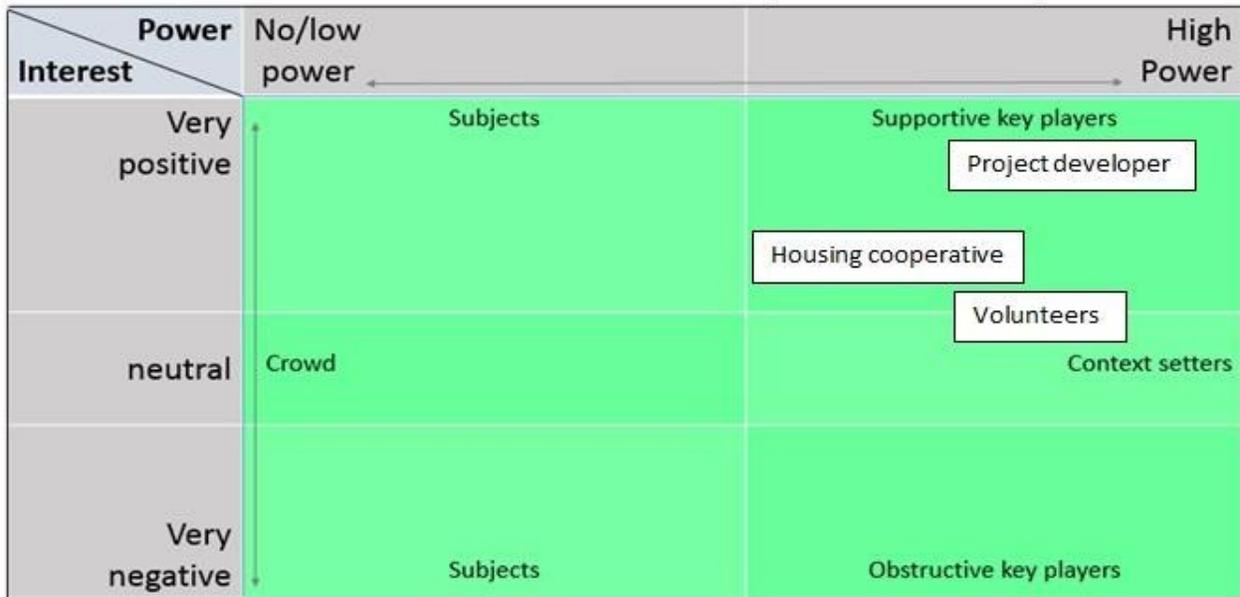


Urban Agriculture

The project developer: high on power due to her skills to develop the project in cooperation with the housing cooperative and residents; high on interest (intrinsically highly motivated to do social cohesion type of projects).

Housing cooperative: High on power due to the financial support and policy support to the initiative; reasonably high on interest because they see the improvement of the neighbourhood and its positive effect on their property.

Volunteers: high on power as there are few people who want to spend time working in the green spaces; interest is reasonably high as they see the general effect of their work on their living surroundings.



Natuurtalent

The management of Talent for Nature is the spin on the web relating to principals and to partner social enterprises and to the enterprises who are members of the Talent for Nature; high on power and on interest.

(Semi)-public organizations/customers: high on power being principals for services rendered by Talent for nature (no customers – no food garden); interest could be mentioned as neutral because the principals have other possibilities to purchase services.

Enterprise partners: high on power because of their interdependence to work together to have a stronger market position; interest high because of their shared common goal as partners.

Member enterprises of Talent for Nature: high on power because they legitimize Talent for Nature and because of their contribution to maintain the terrain; reasonably high on interest (to a certain extent the members are dependent on Talent for Nature for having their material space to work on. Reasonably high on interest as they are dependent on Talent for nature to uphold their own business.

Volunteers: low on power (others people can be found as volunteer) and low on interest (they are generally interested in doing activities related to green).

| Power / Interest | No/low power | High Power |
|------------------|-------------------|--|
| Very positive | Subjects | Supportive key players Member enterprises, management |
| neutral | Crowd, Volunteers | (Semi) public organizations/ customers, stakeholders |
| Very negative | Subjects | Obstructive key players |

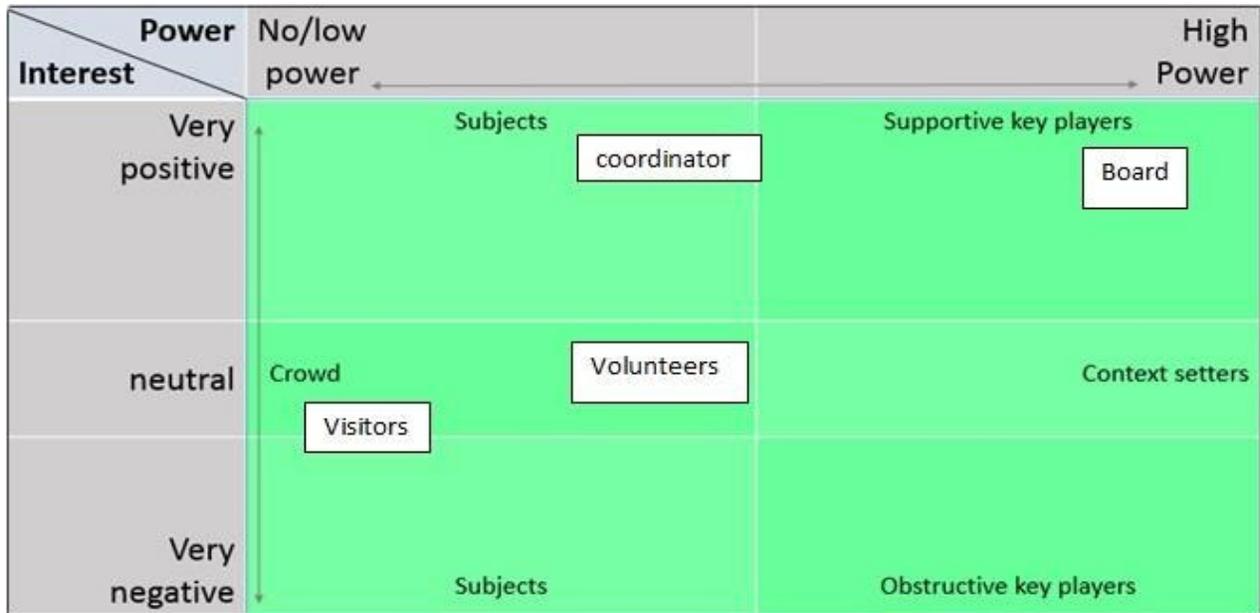
De Enk Garden

Coordinator: relatively low on power being employee in an executive organization: high on interest (being intrinsically motivated to do this job)

Board of the semi-public organization: highly powerful as they develop and maintain by policy and finance the Enk garden: high on interest to keep the garden

Volunteers: relatively low on power as they can be substituted by others; more general in their interest i.e. to be able to work in the green surroundings.

Citizens/visitors: low on power and neutral in interest.



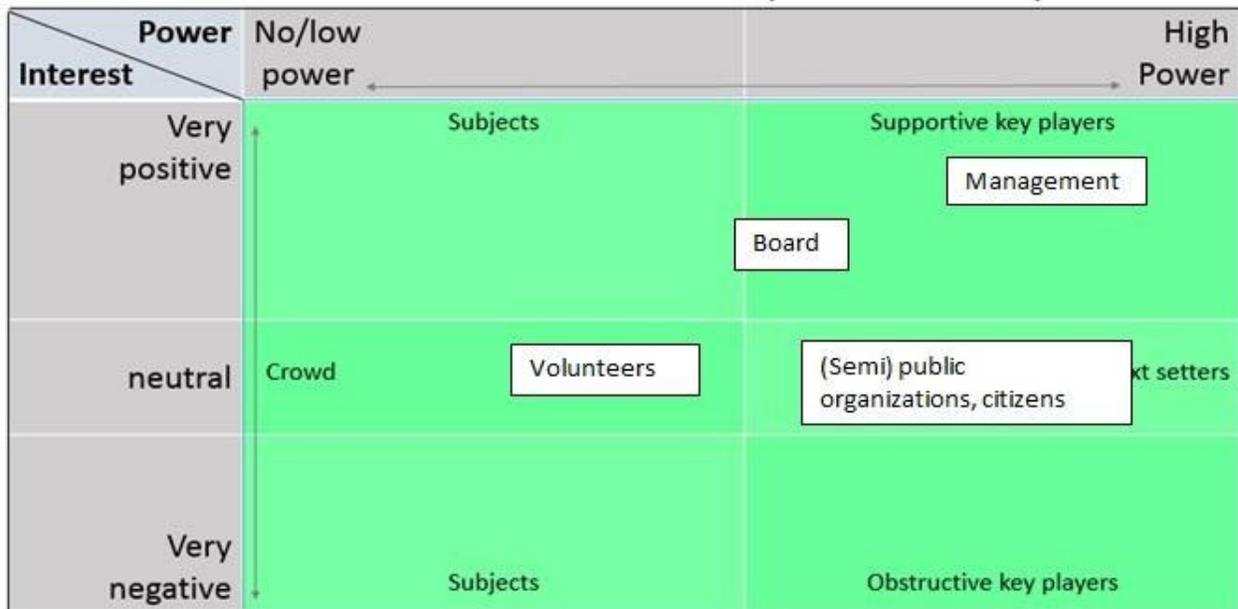
Rotterdamse Munt

Manager: high on power being the spin in the web in the garden itself (organizing volunteers, selling, planning, applying for subsidies); high on interest because of intrinsic motivation.

Board of the Rotterdamse Munt: relatively high because of their support in developing plans; reasonably high on interest (intrinsic motivation)

(Semi) public organizations/citizens: high on power being principals/buyers of produce and services; interest could be mentioned as neutral because the principals have other possibilities to purchase services;

Volunteers: relatively low on power as they can be substituted by others (although it is hard to find volunteers); more general in their interest i.e. to be able to work in the green surroundings.



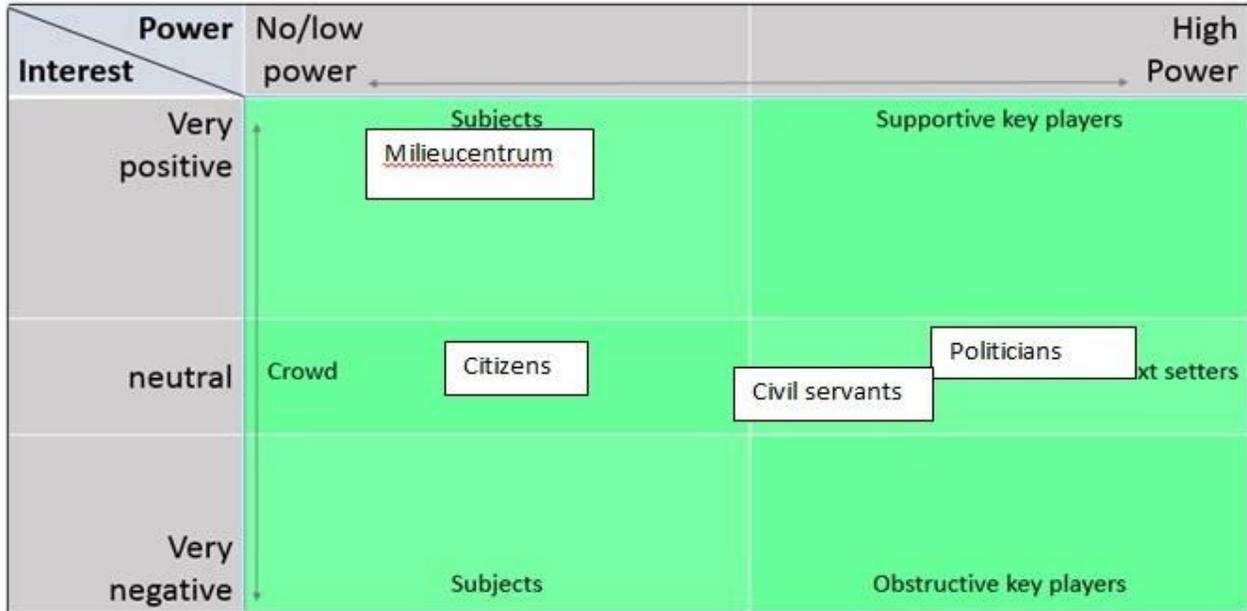
De Dakakker

Initiator: Milieucentrum as initiator sees it as a demo-project has low power because of their dependency on the owner of the building and politicians; high on interest because of their intrinsic motivation.

Politicians: high on their power to elaborate further on the project; reasonably lo on their interest because of the priority they give to the project.

Civil servants: relatively high on power to elaborate on the project: reasonably low because of the assigned priority.

Citizens: being visitors they are low on power and neutral on interest.



Hofbogen

Green food/owner/manager: being the initiator they are high on power as they develop in their cooperation with the municipality the project goal as they are also the organizers of the project (planning, relations with volunteers); high on interest because of their intrinsic motivation for the overall goals of the project.

Municipality: High on power, because being co-developer of the project goal and giving the financial support: high on interest because of the public goal of the project.

Volunteers: relatively low on power as they can be substituted by others; more general in their interest i.e. to be able to work in the green surroundings.

| Power Interest | No/low power | High Power |
|-------------------|--|---|
| Very positive | Subjects | Supportive key players <div style="border: 1px solid black; padding: 2px; display: inline-block;">Green food</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 20px;">municipality</div> |
| neutral | Crowd <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">Volunteers</div> | Context setters |
| Very negative | Subjects | Obstructive key players |

2.2 Oslo

2.2.1 Stakeholder mapping

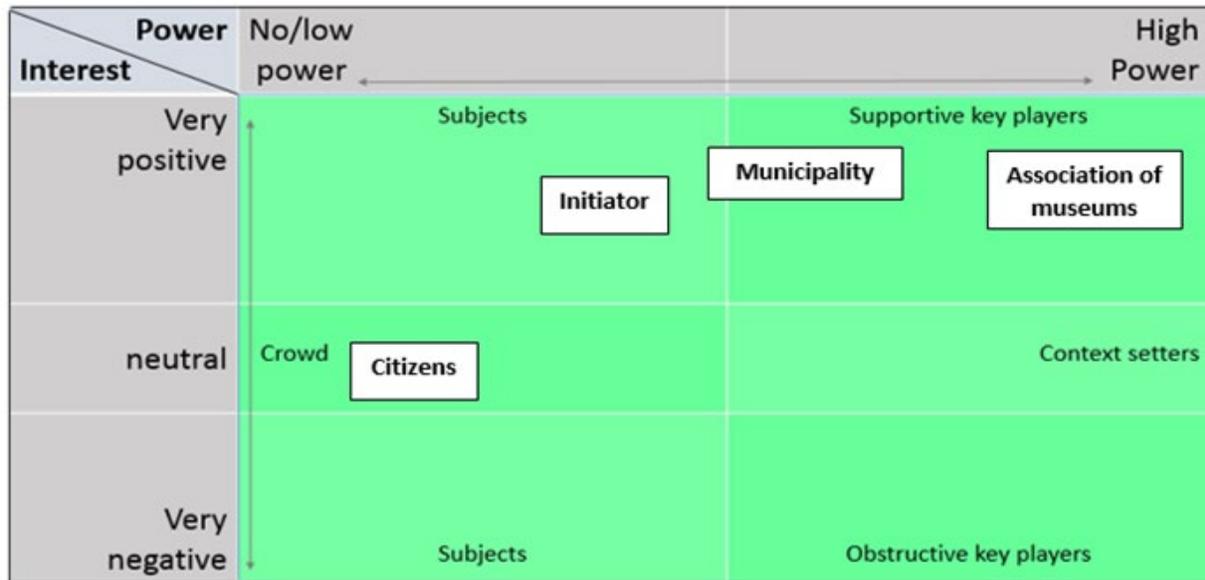
Linderud Manor

CSA Initiator: relatively low on power being employee of the museum; relatively high on interest (being intrinsically motivated with the establishment of the CSA), and for the potential of learning from other city-owned farms.

Association of museums (MIA) (Linderud Manor is part of the Museums in Akershus, MIA, which consists of 20 museums across the whole region): high on power and high on interest.

Municipality: relatively high on power (support the initiative and gave financial support for starting the CSA); high on interest because of the public goal of the project (grow vegetables together and create a sense of community).

Citizens: being visitors they are low on power and neutral on interest.



Tveten CSA

CSA Coordinator/farmer: the interest and power are starting to grow in the moment (they are getting interested in buying CSA shares): Increasing interest in participating in the cultivation, and having an institutional share in the CSA. High interest for the potential of learning from other city-owned farms.

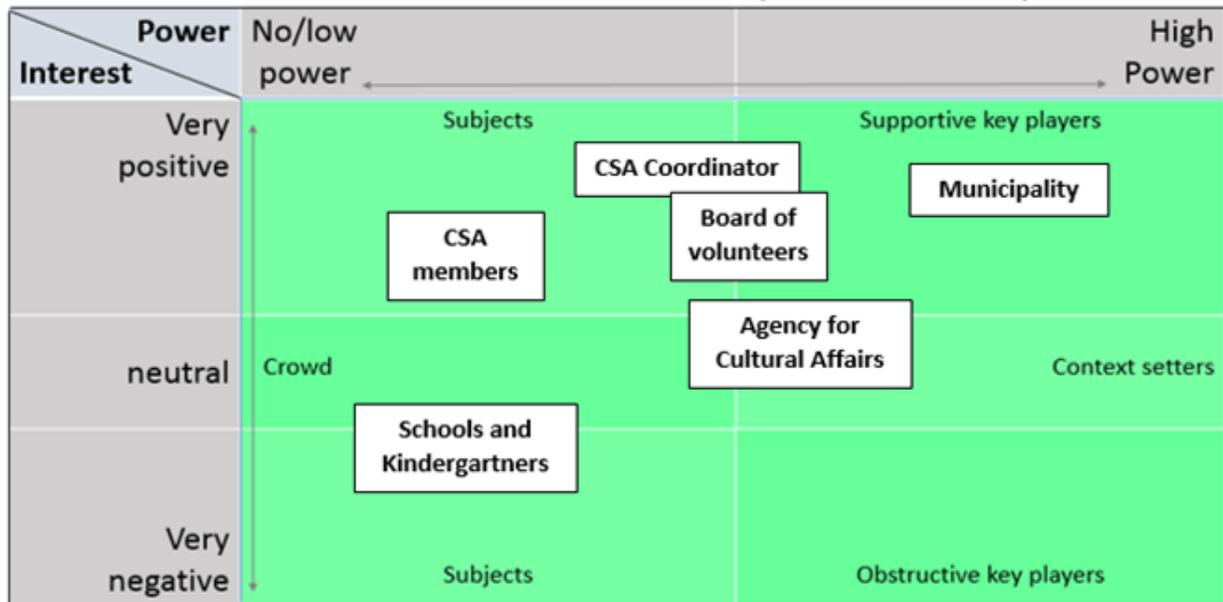
CSA board of volunteers: low on power (other people can be found as volunteer to be part of the board); high on interest to keep the CSA running.

CSA members: low on power (other people can buy shares) and relatively high on interest.

Municipality: high on power (they own the land, support the initiative and gave financial support to start the CSA): high on interest because of the goal of the project (local vegetable production and beekeeping).

Agency for Cultural Affairs (a person working for this agency applied for funding to start the CSA last year): relatively high on power (own the buildings at Tveten farm); medium on interest (but growing)

Schools and kindergartens: the interest and power are starting to grow in the moment (they are getting interested in buying CSA shares).



Lif Laga

Initiator (the program coordinator is a social worker from the Municipality): relatively high on power; very high on interest (being intrinsically motivated to coordinate this project).

Board of the foundation (newly formed): relatively high on power and high on interest.

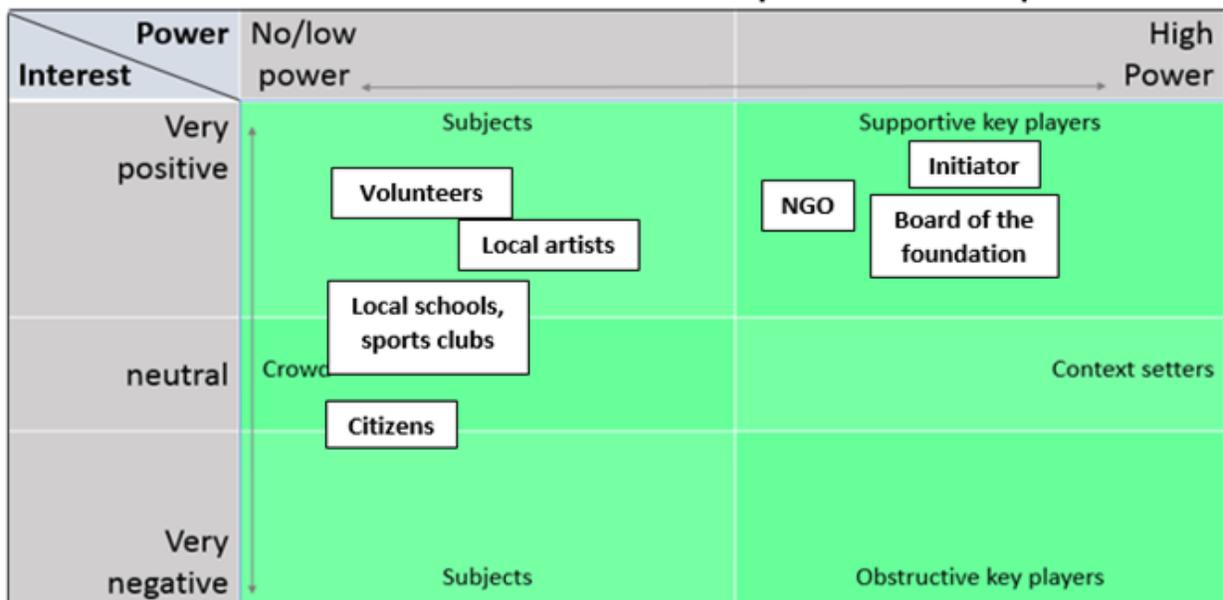
Non-governmental organization (NGO) that manages different reception centers in the area: relatively high on power (also part of the board); high on interest because of the goal of the project.

Youth from reception centers and other volunteers: relatively low on power (other volunteers can be found, although there is a core team of volunteers very active); relatively high on interest.

Local schools, associations and sports clubs (link between Lif Laga and the youth and children participating in picking apples and events): low in power; relatively high on interest.

Local artists that design bottle labels and celebrity supporters: relatively low in power; relatively high on interest (because of the goal of the project).

Citizens: low on power and neutral on interest (many neighbors support this initiative because it has given a more positive image to the area and people feel prouder of their neighborhood).



Oslo Living Lab

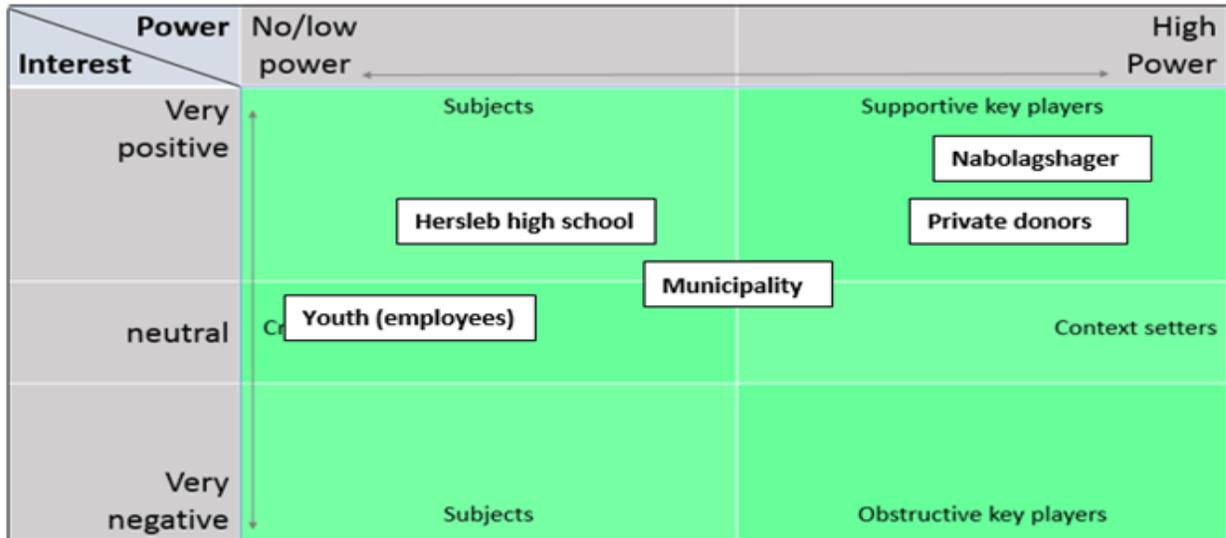
Initiator: high on power (the youth program was initiated by Nabolagshager as a summer job program); high on interest (being intrinsically motivated with the goal of the program).

Hersleb high school: (partner for the recruitment of youth): relatively low in power; relatively high on interest.

Youth that work at Oslo Living Lab: low in power (other employees can be hired); relatively high on interest.

Municipality: medium power (various entities within the city follow closely the initiative, including the district, the department of education and department of environment).

Private foundations/donors: relatively high power (funding support); relatively high on interest.



Herbanists

Initiators (owners of the business): high on power; relatively high on interest (being intrinsically motivated, but still a hobby growing into a business).

Agency of Urban Environment: high on power (they own the land where Herbanists grow herbs); relatively high on interest (big focus on urban agriculture).

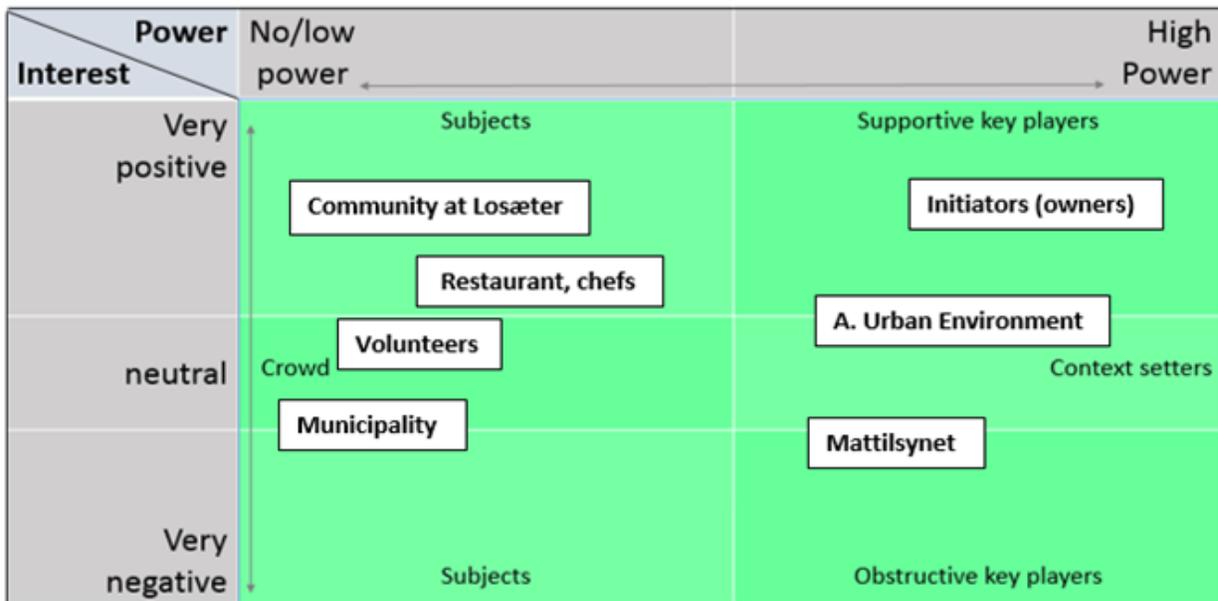
Restaurants/chefs (they buy their herbs for cooking and flowers for decorations): relatively low on power; neutral on interest (but growing).

Municipality: low on power (very little funding to support volunteer activities and educational courses/workshops); neutral/medium on interest.

Community at Losæter garden: relatively low on power; relatively high on interest.

Volunteers (help in maintenance of the herb garden in Losæter): low on power; interest is more general i.e. doing some green activities.

The Norwegian Food Safety Authority (Mattilsynet): relatively high in power; low on interest.



Onkel Trolls Spiskammer

Initiators (owners): high on power; relatively high on interest (being intrinsically motivated, but still a hobby growing into a business).

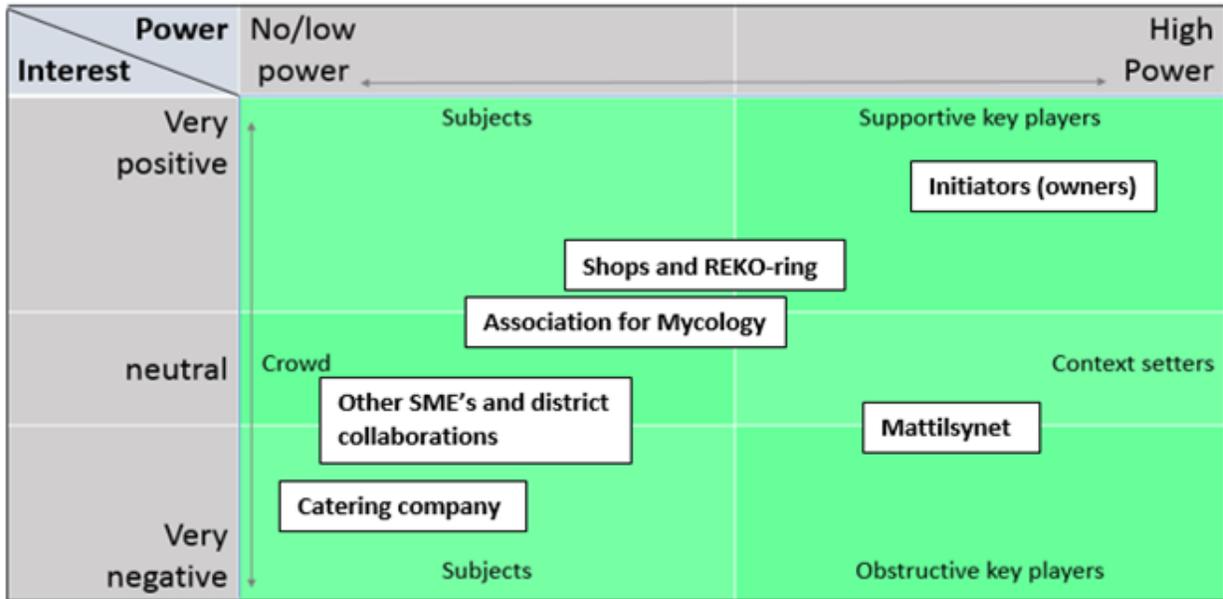
Shops that sell their products and REKO-ring (REKO stands for “fair consumption markets”): relatively high on power; medium on interest (gourmet products).

Small local collaborations with other SMEs (new products) and district (educational courses and workshops): low on power; relatively low in interest.

Catering company (rent kitchen for production): very low on power (they can find another kitchen to rent): very low on interest.

The Norwegian Association for Mycology and Foraging (knowledge partner): low in power; neutral on interest.

The Norwegian Food Safety Authority (Mattilsynet): relatively high in power; low on interest.



Gruten

Initiator (owner): relatively high on power; high on interest (being intrinsically motivated).

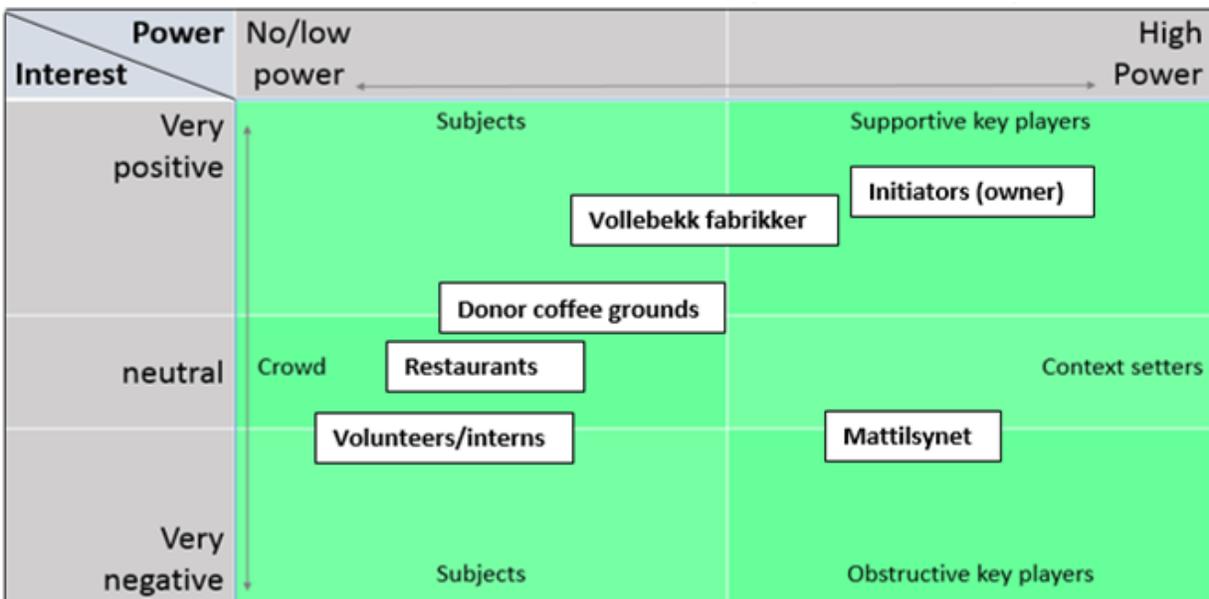
Donor of coffee grounds (Gruten charge a symbolic amount for this service of picking up coffee grounds): relatively low on power (they can find other donors); relatively high interest (more businesses want to cooperate with them).

Restaurants/chefs/REKO-ringen: relatively medium on power; neutral on interest (but increasing)

The Norwegian Food Safety Authority (Mattilsynet): relatively high in power; low on interest.

Vollebekk fabrikker (a temporary place for the development and incubation of solutions within reuse, repair and green production): relatively high on power (the oyster mushroom farm is located here); high on interest because of the goal of the business.

Volunteers/interns: very low on power; neutral on interest.



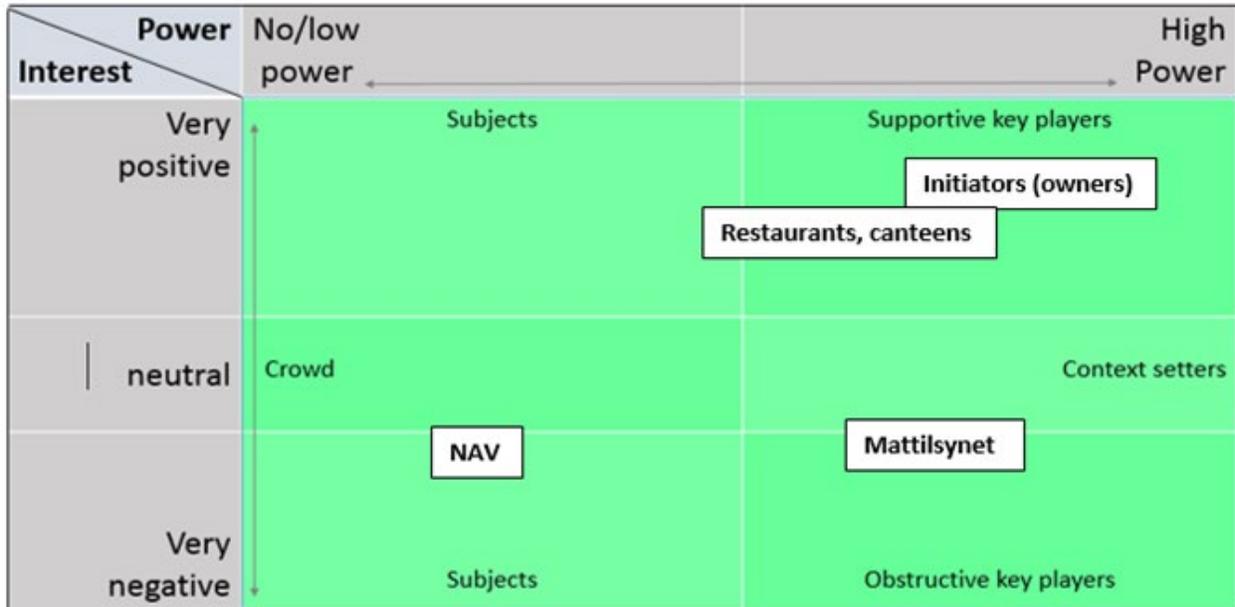
Tåsen Microgreens

Initiators (owners): high on power and on interest.

Restaurants, canteens that buy microgreens directly from them: relatively high on power and on interest.

Norwegian Labour and Welfare Administration (NAV) (supports salary costs of some staff while in training): relatively low on power and on interest.

The Norwegian Food Safety Authority (Mattilsynet): relatively high on power; low on interest.



ByBi

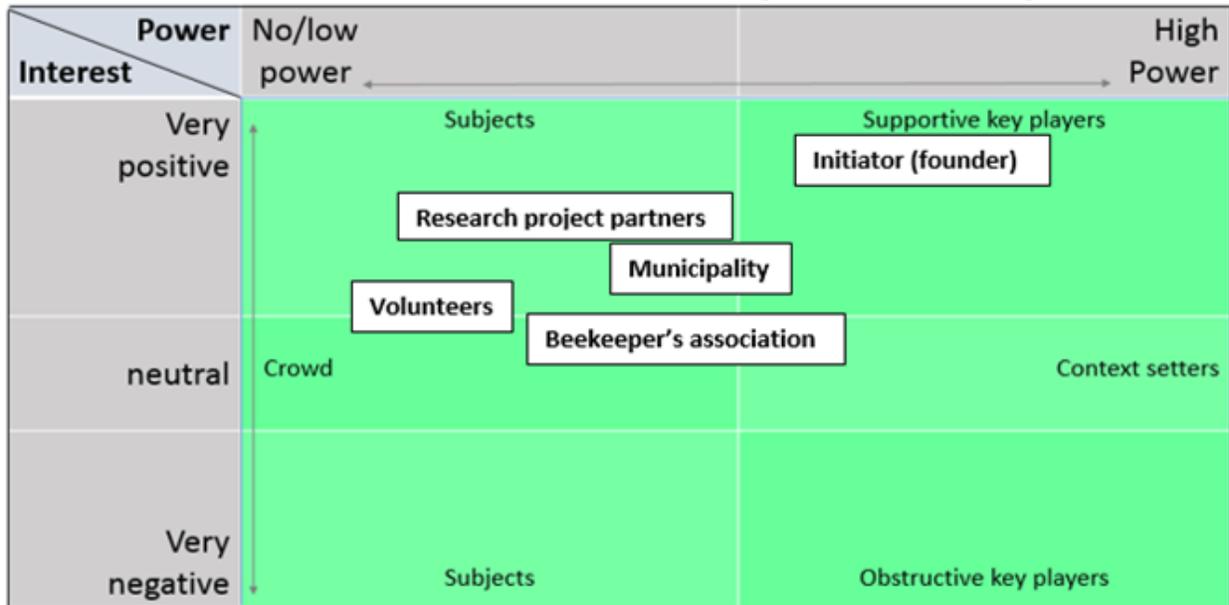
Initiator (founder): relatively high on power; high on interest.

Norwegian Beekeepers Association (they support Bybi’s members with honey collection, as well as they support Bybi’s research projects): medium on power; high on interest.

Research project partners: medium on power (due to their collaborations they get funding for activities, seminars, etc): high on interest.

Municipality/County Governor: medium on power (public support and some funding); relatively high on interest.

Volunteers (mainly beekeepers): relatively low on power (other volunteers can be engaging in this activity): relatively high on interest.



Dr. Dedichens Drivhus

Initiators (volunteers): medium on power; high on interest because their intrinsic motivation.

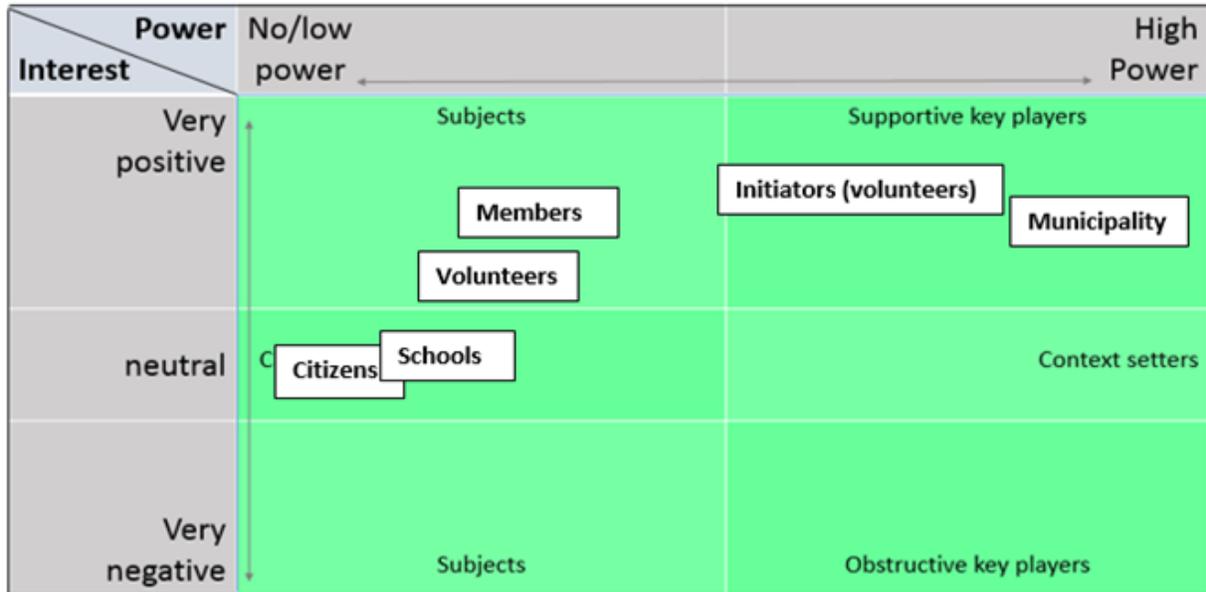
Members of the organization (mainly families with small children that pay a small fee): low on power (other members can be found); relatively high on interest.

Schools and kindergartens: low on power; neutral on interest (but increasing).

Municipality/district: high in power (they pay the rent of the space); relatively high on interest.

Volunteers: relatively low in power; relatively high on interest.

Citizens: low on power and neutral on interest (many neighbors support this initiative because of the goal of the project).



2.3 Andernach

2.3.1 Stakeholder mapping

Andernach ECS 1

Municipalities: as main shareholders of ECS 1 are high on power and on interest, of course.

JobCentre (state agency): high on power due to arranging the clients for many activities provided by ECS 1 and high on interest to achieve the main goal of their work, the qualification and job creation.

Customers: since the portfolio of ECS 1 with qualification and training measures is broader overall, the end consumers play a more neutral role with regard to power and interest.

Clients: low on power (others people can be found as clients) and high on interest (they are generally interested in qualifying themselves).

Schools and Kindergartens: high interest, as they want to participate in environmental education programs and excursions, but low on power due to low monetary potentials.

| Interest \ Power | Power | |
|------------------|-------------------------------------|--|
| | No/low power | High Power |
| Very positive | Subjects Schools Clients | Supportive key players Job Centre Municipalities |
| neutral | Crowd | Customers Context setters |
| Very negative | District Administration Subjects | Obstructive key players |

Andernach ECS 2

Municipalities: are high on power and interest – they are the main bulk buyers.

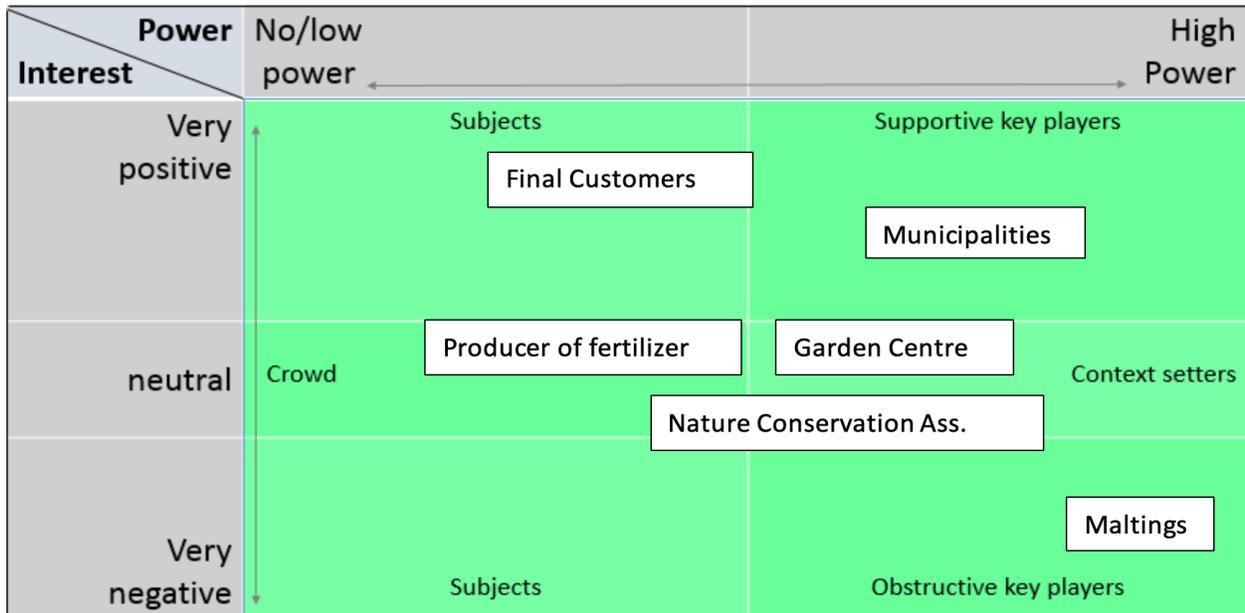
Maltings: are high on power as this is the main supplier for main products and starting materials, SME is highly dependent on them but they are low on interest because it is not their main business.

Garden Center are in the quite neutral as customers for special sustainable fertilizers.

Nature Conservation Association: are also neutral but facilitate also through guidelines and recommendations.

Same applies for **producers of fertilizers**

Final Customers: high on interest for this special product but low to neutral on power because private final customers are just one group of consumers.



Andernach ECS 3

Press & Social Media: are high on interest because of the actual climate discourse and high on power due to its broad reach, in order to grow at the moment, the organisation is very relying on positive reporting and broad public relations work

Kindergartens and Primary Schools: are very interested and have high power as one the main participant groups.

Volunteers: absolutely necessary to exist, with great internal interest, of course and high on power as there are no financial reserves yet to pay for the work done.

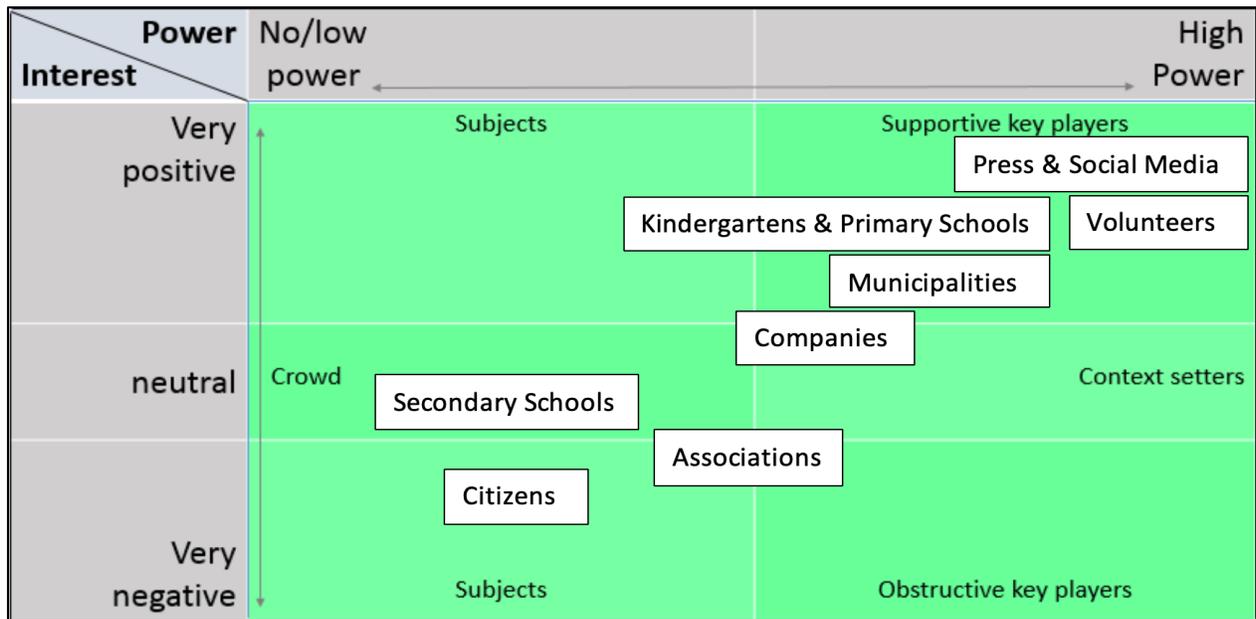
Municipalities: high on power as very important promoter of the projects and high on interest as the image of the city can be improved.

Companies: are more neutral on power because it is not their main business neutral to high on interest in order to improve their own image.

Associations: very diverse but on average neutral on power and interest.

Secondary Schools: are one the main participant groups but are lower on interest as primary schools due to more complex interests.

Citizens: are a very inert mass, which still have to be motivated, therefore less on interest and power.



Andernach ECS 4

Cooperative: as the overarching franchise partner high on interest and neutral to low on power because of the independent store manager.

Employees: very engaged employees are high on interest and high on power because they are the heart of the company.

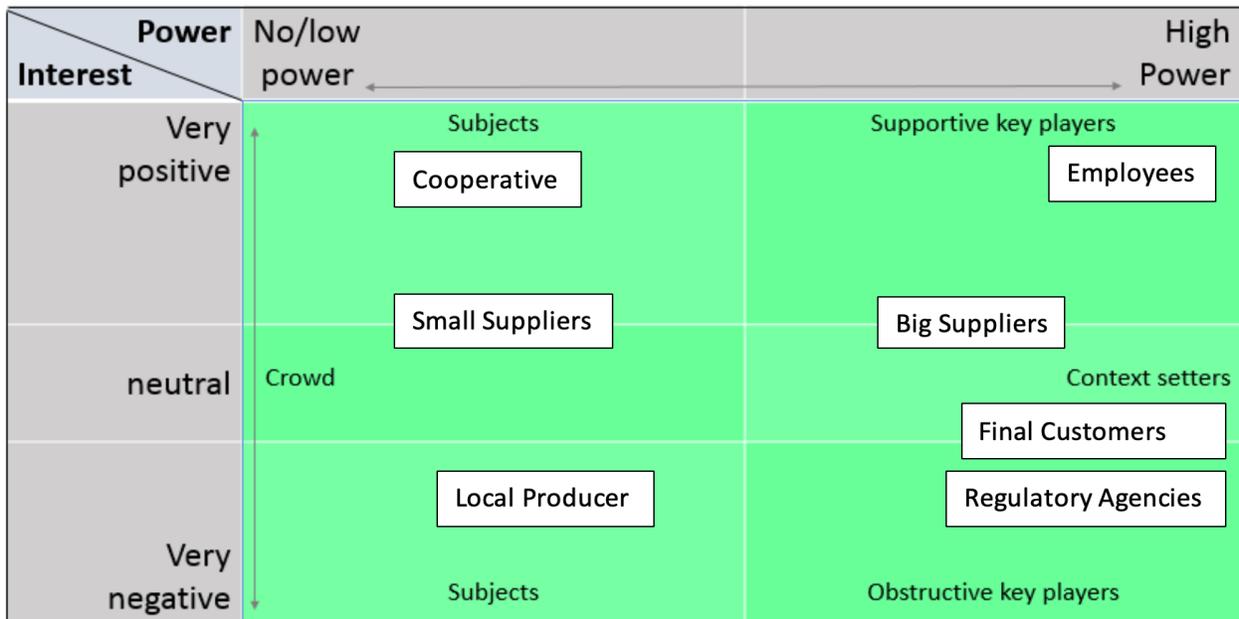
Regulatory Agencies: as context setter they are low on interest but high on power because they are able to close the store if regulations are not observed.

Big Suppliers: high on power because they can determine the prices and low to neutral on interest because this supermarket is just one of many others.

Small Suppliers: are neutral on interest and low to neutral on power because of mutual dependencies and smaller sales markets.

Local Producer: the interest and power are starting to grow in the moment.

Customer: in supermarkets the customer is king, therefore high on power and low on interest because there are a lot more markets in Andernach.



Andernach ECS 5

Municipality: as main supporter and promoter very high on interest and power.

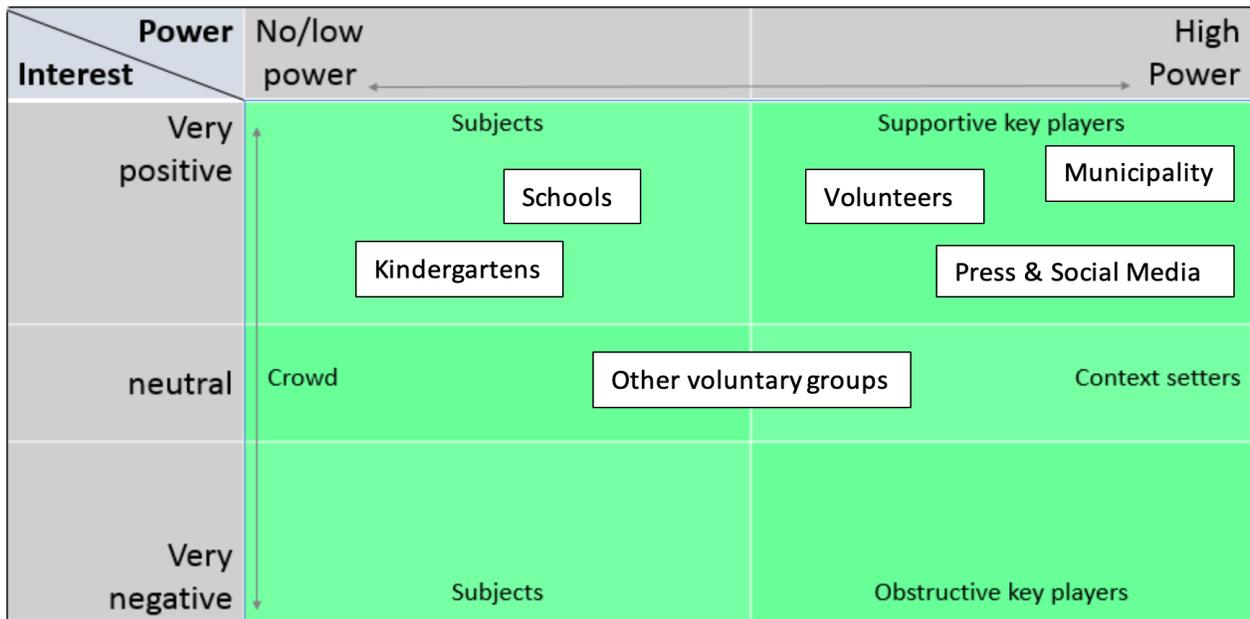
Volunteers: do the majority of the work and are indispensable for the whole organization, therefore very high power and high intrinsic interest.

Press & Social Media: due to the great reach high on power and due to actual climate discussions neutral to high on interest.

Schools: as important participant group high on interest, power is actually growing in the frame of Fridays for future.

Kindergartens: same applies here.

Other voluntary groups: neutral to high on interest because of necessary knowledge transfer between the group and neutral to low on power because of the small network.



Andernach ECS 6

Family: this SME is at present pursued as a time-consuming hobby beside the actual occupation, therefore the family of the partners are high on power and interest.

Final Customer: special products have highly interested customers, neutral on power because of the starting phase of the SME.

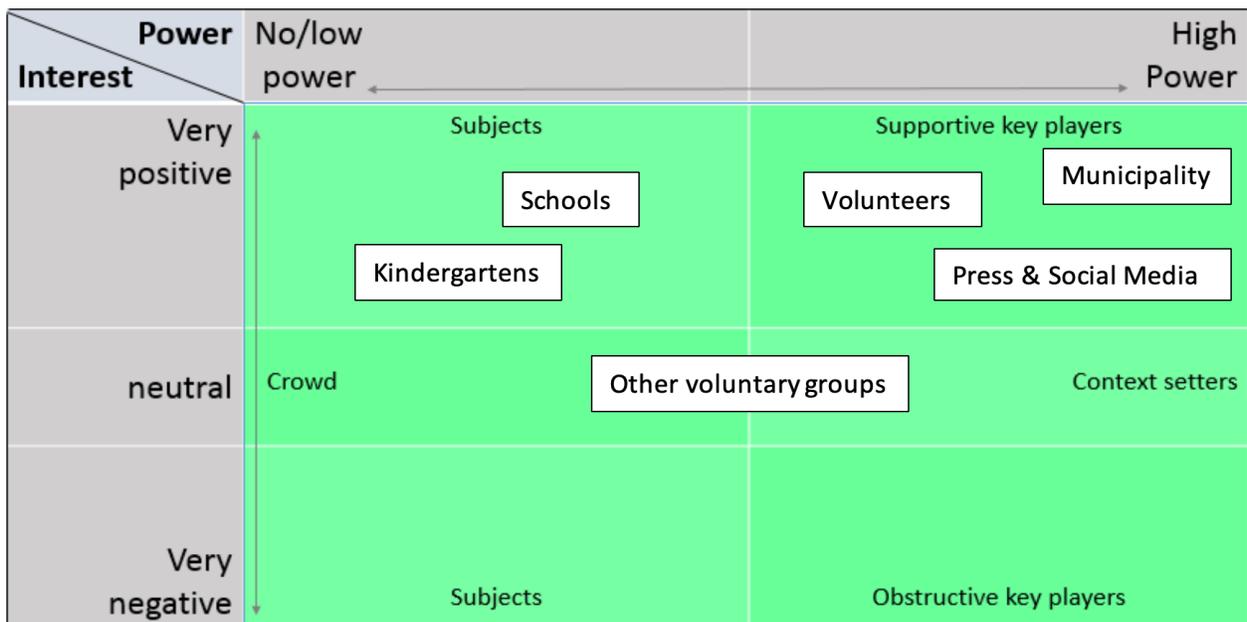
Municipality: high on interest because they want to support companies which try to close resource and waste loops.

Actual employer: knows and accepts the situation that an enterprise is still operated in the spare time, high on power because he guarantees over the regular work and payment of his employees the "expensive hobby".

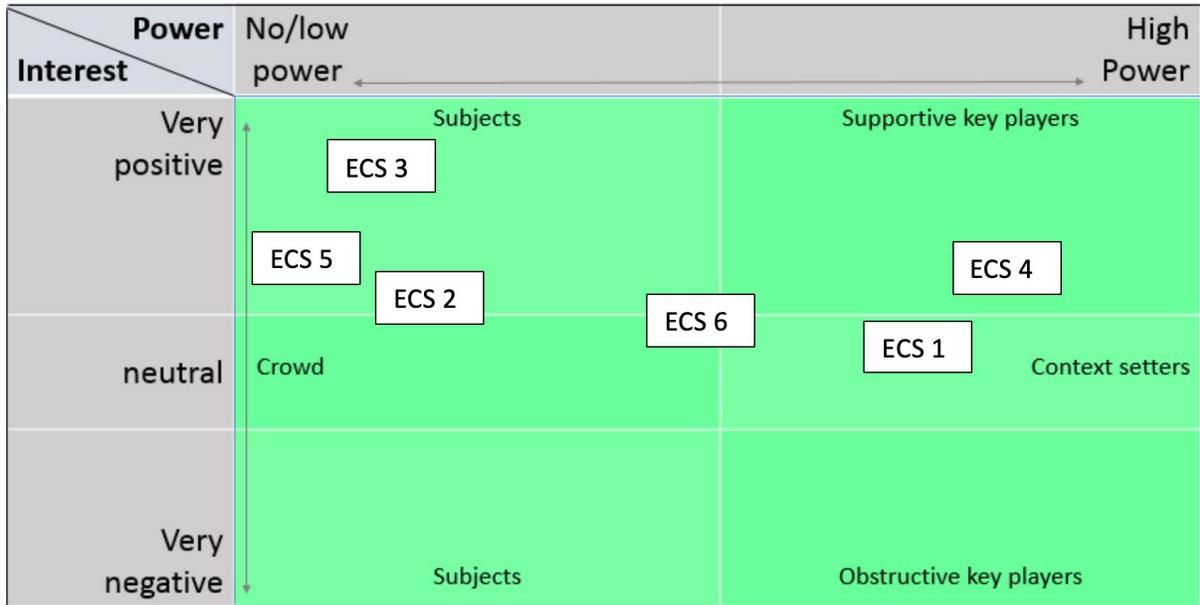
Competitors: as context setters high on power and low on interest.

Press & Knowledge Transfer: the product still lacks popularity and trust that's why press and knowledge transfer is high on power and low on interest.

Lawmaker: as the main important context setter determine the lawmaker important basis regulations that's why they are very high on power and low on interest.



All ECSs in Andernach in one map



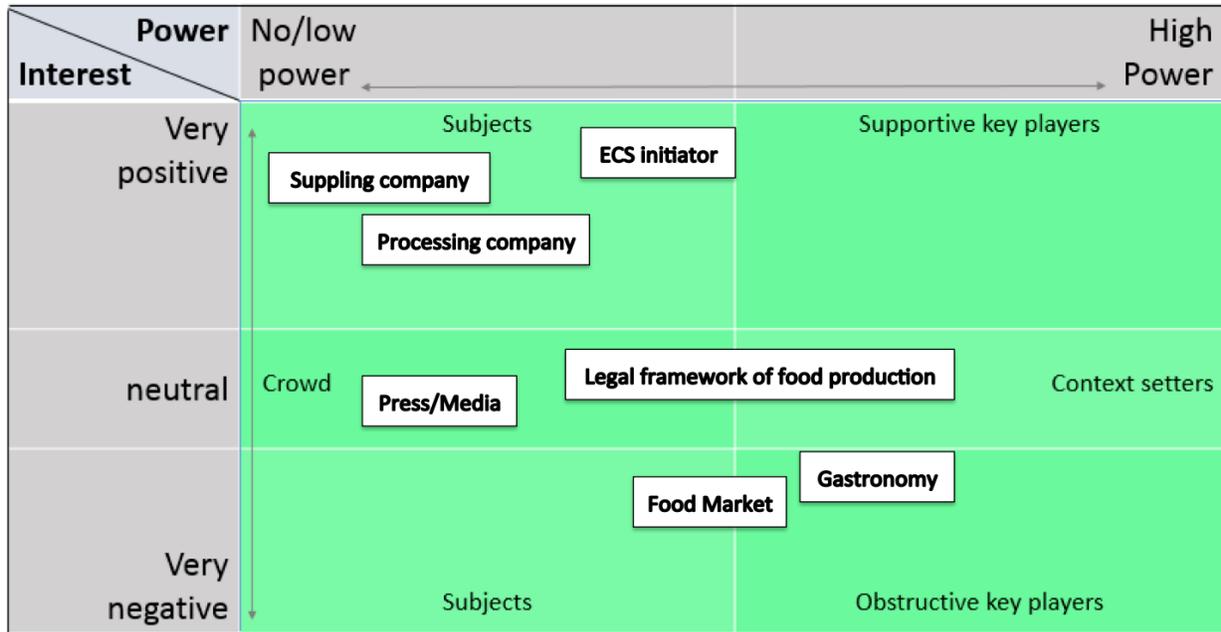
Berlin ECS II

Initiator: ECS II is initiated by one person with gastronomic background and runs up to now as ‘costly hobby’. This start up is currently developing products in the novel food sector and testing market acceptance in an online shop.

There are already suppliers and processing companies that are supportive of the startup.

Food market and the **Gastronomy** in general are not perceived as supportive, a market for the ECS products of the startup is not established. The legal framework of producing and selling the products is also not “regulated”, thus the products are placed in a “grey zone”.

Press/Media can be key actors in establishing a market.



Berlin ECS III

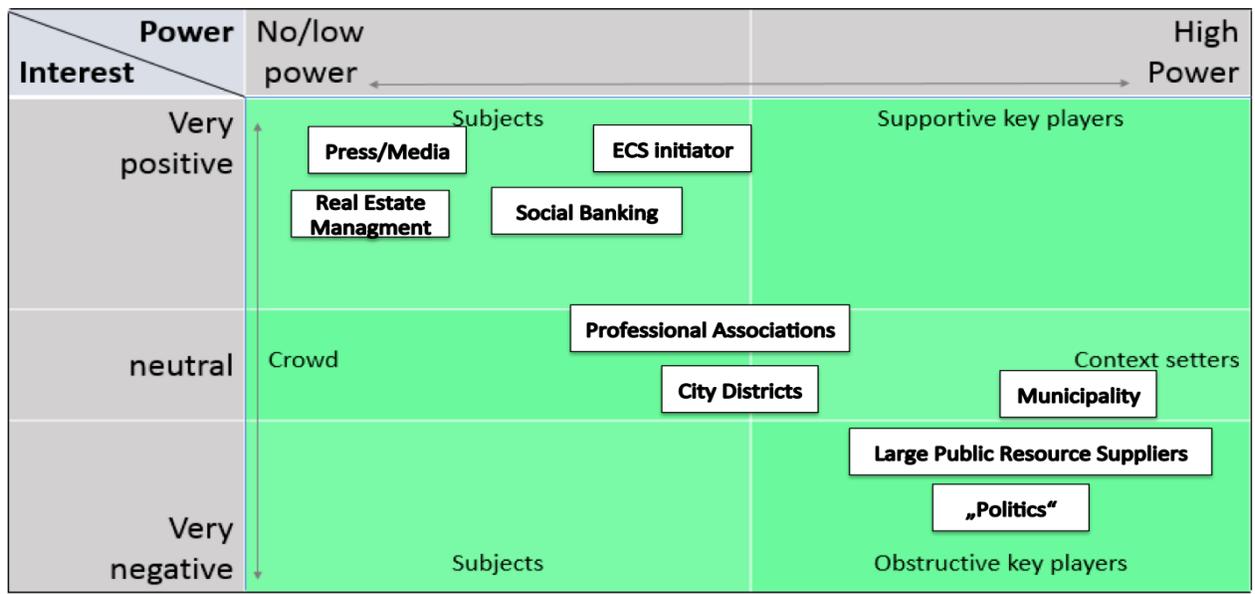
Initiator: ECS III was initiated as a startup developed in an academic context and run long time as a “one man show”. Currently ECS III employs 4 people. ECS III is a SME for innovative resource use concepts. ECS III are specialized in the planning, design, R&D and implementation of circular economy, and has ECS experience since 2013.

Press/Media: have been perceived as very supportive and pushed information on circular economy activities of the ECS.

Citizens and Real Estate Managers are very interested in the ECS products of the SME.

Professional Associations, Social Banking, City Districts and the **Municipality** were perceived as neutral and could do much more to support the principles of circular economy. This potential has to be explored, activated and used for the SME.

Large Public Resource Suppliers and the “**Politics**” in general are not perceived as supportive at all due to contrasting main interests.



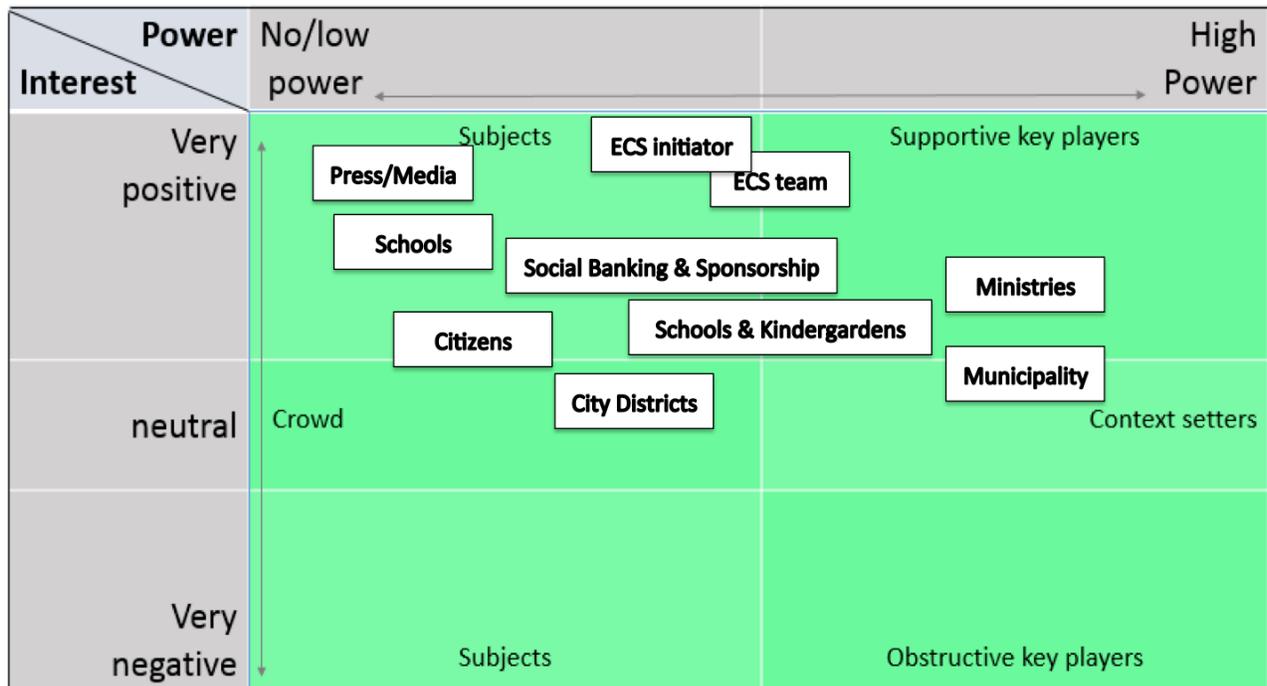
Berlin ECS IV

Initiator: The CEO is the visionary and manager that currently employs more than 60 people and is one of the most successful startup in the region.

Press/Media and **Award** winning and **Sponsorship** pushed the success story of ECS IV a lot.

Citizens, schools and **kindergartens** are key drivers of success.

Several **Public** and **private partnerships** are established. **Social Banking, City Districts, Municipalities, City district administrations** and **Ministries** were perceived as supportive. This potential has been explored, activated and successfully used for the SME.



Berlin ECS V

Initiator: The CEO is the visionary (and less the manager) of ECS V that oscillated between dozens of people involved and a 'one man show'. Currently ECS V is redefining goals and perspectives.

Press/Media: pushed the success story of this ECS of ECS V a lot.

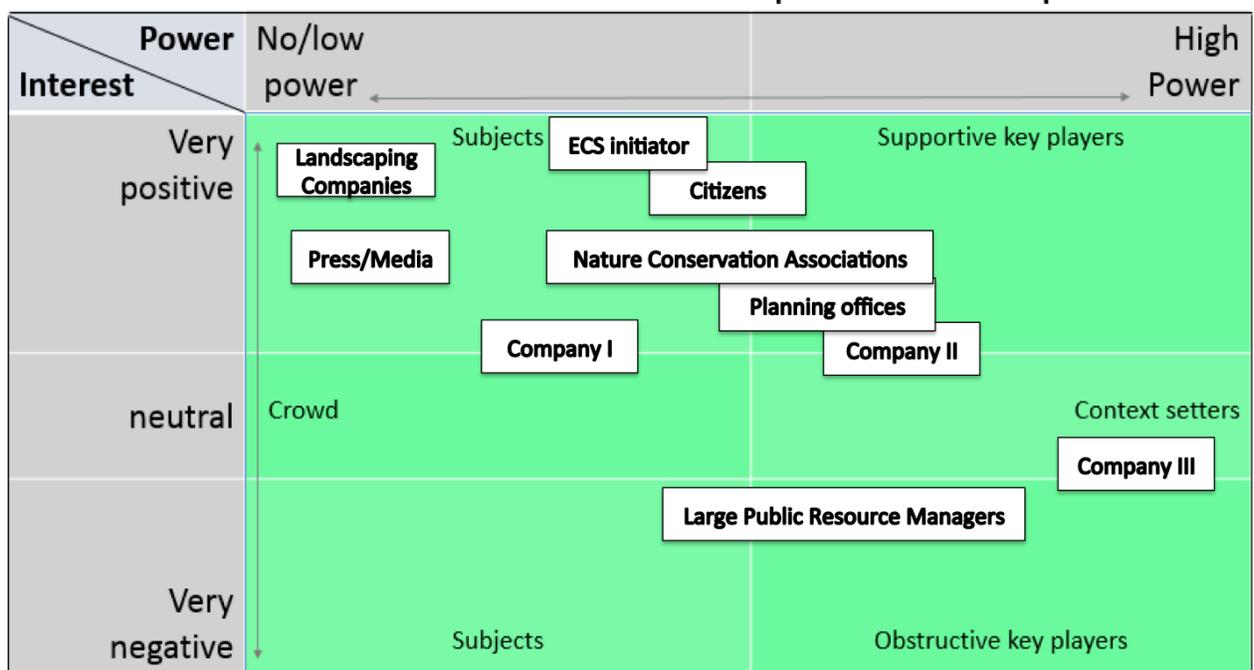
Citizens are key drivers of success.

Landscaping Companies, Nature Conservation NGOs and **Planning Offices** are very interested in the ECS products of the SME and partially powerful drivers.

Several Companies engaged with the SME and are solid partners in different projects.

Professional Associations, Social Banking, City Districts and the **Municipality** were perceived as neutral and could do much more to support the principles of circular economy. This potential has to be explored, activated and used for the SME.

Some **Large Public Resource Manager** are not perceived as supportive at all due to contrasting main interests, however, there have been initial conversations.

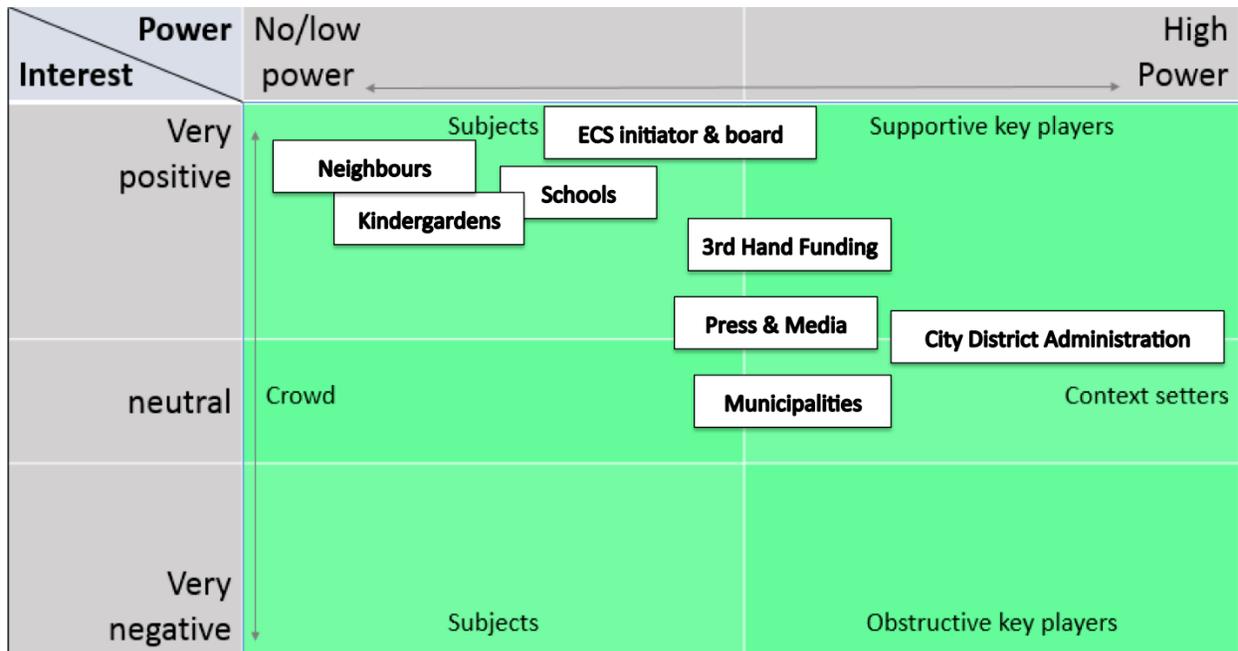


Berlin ECS VI

Initiator: The CEO is the visionary and manager that currently works with a board of 5 people that get a salary by the SME.

Anchoring in the **neighborhood** and frequent presence in **Press/Media** are very important for the long term establishment of the SME. **Sponsorship** also pushed the success story of ECS VI a lot. **Citizens, schools** and **kindergartens** are key drivers of success.

Municipalities, City district administrations and **Ministries** were perceived mostly as supportive. This potential has been explored, activated and successfully used for the SME.



Berlin ECS VII

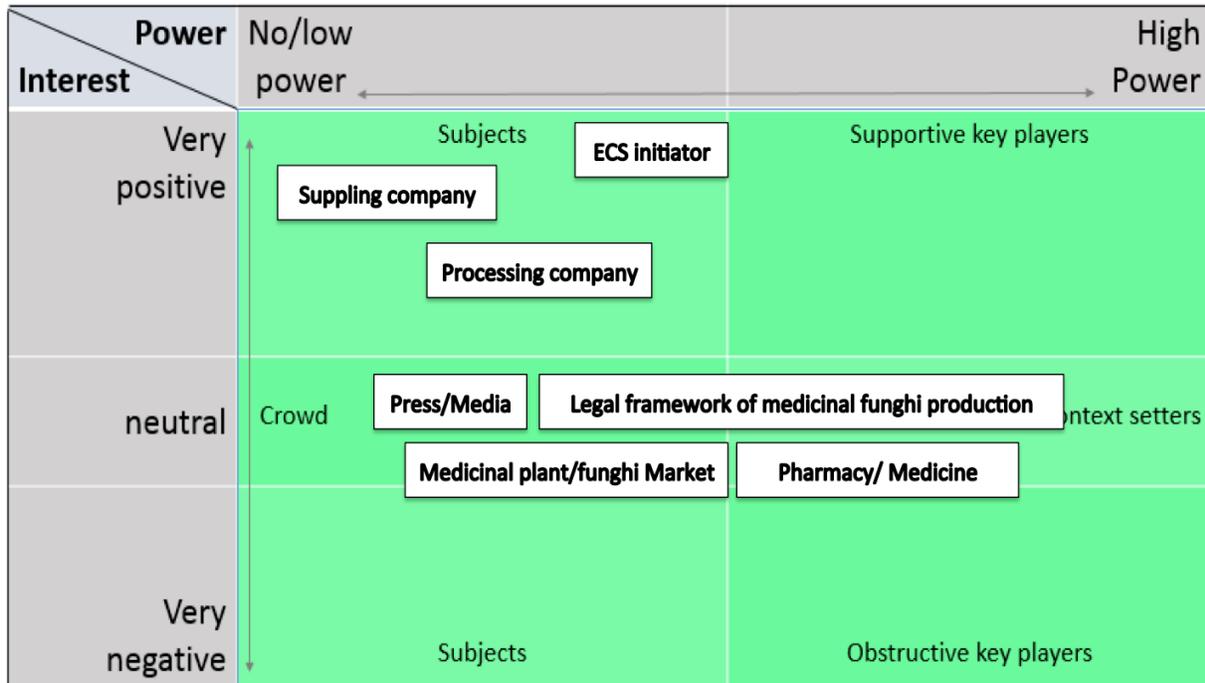
Initiator: ECS VII is initiated by one person with plant medicinal background and is in its infancy. The ECS is currently developing business ideas and concepts.

There are already interested **suppliers** and **processing companies** that are supportive of the ECS initiative.

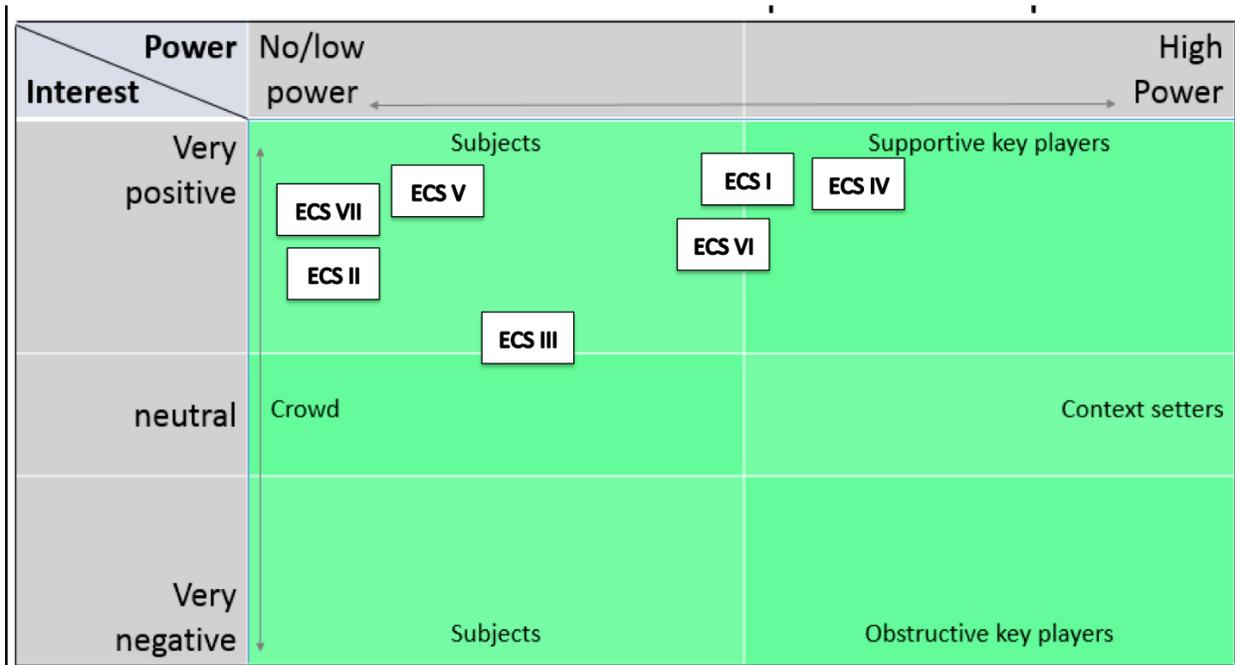
Medicinal **plant and fungi market** and the **Pharmacy/ Medicine** in general are not perceived as supportive, a market for the ECS products is not established.

The **legal framework is** also not clear.

Press/Media can be key actors in establishing a market.



All ECSs in Berlin in one map



2.5 Havana

2.5.1 Stakeholder mapping

Havana ECS I

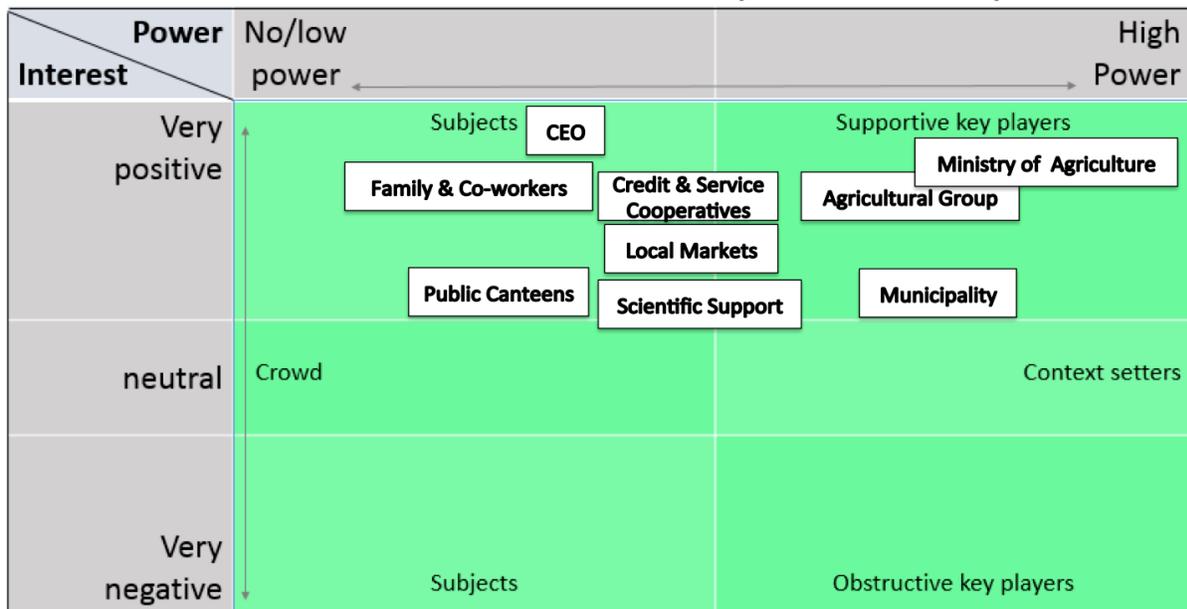
Initiator: the farm is owned and managed by a **family** and two salaried employees, which strongly support the ECS. The CEO is managing the farm with profound economic and managing knowledge.

Credit and Service Cooperative supports the farmers with technical assistance, distribution of products and acquisition of agricultural inputs, seeds, fuels and equipment.

There is a high demand on ECS products from **public canteens** and **local markets**.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality**)

Research institutes are highly dedicated to provide expertise and to share new results.



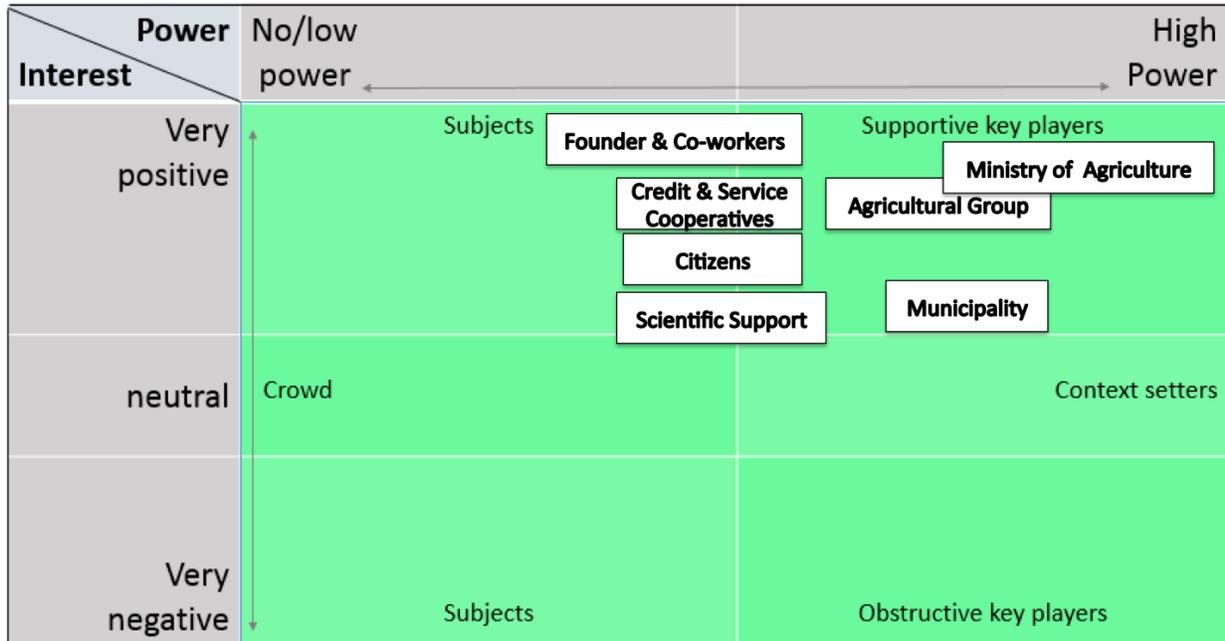
Havana ECS II

Initiator: The organoponic garden is managed by collective (Founder and co-worker), which strongly support the ECS.

The **citizens** in the neighborhood use the local selling stand and strongly support the garden.

Credit and Service Cooperative and local **research institutes support** the garden with technical assistance, distribution of products and acquisition of agricultural inputs, seed, fuels and equipment.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality**).

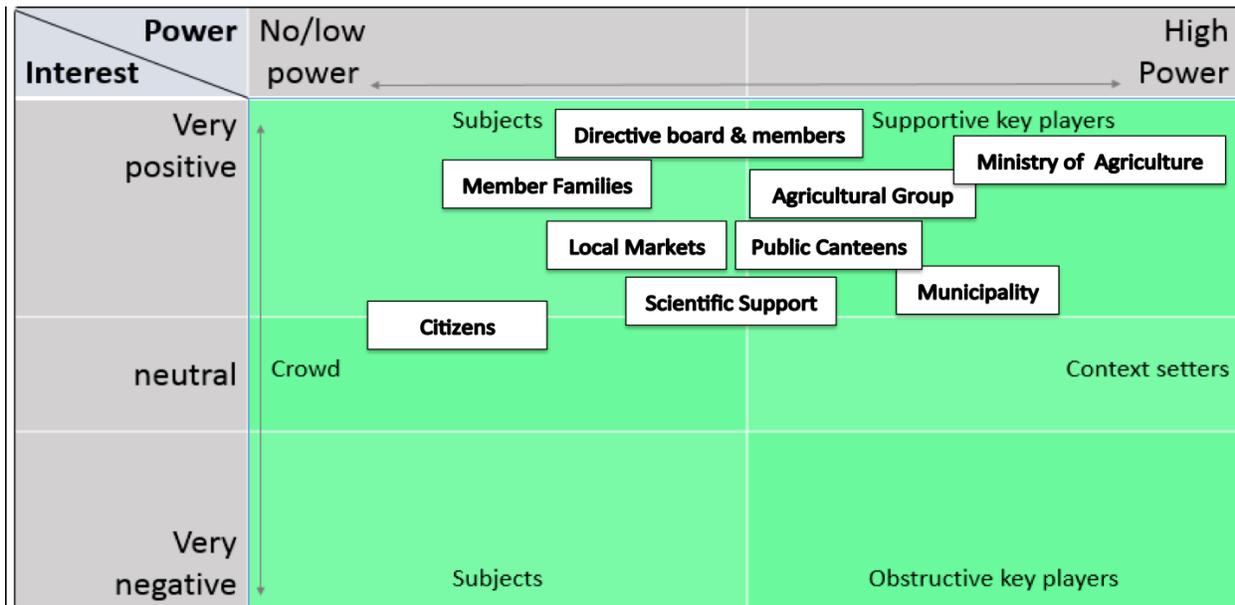


Havana ECS III

The **Directive board** is the main managing authority of the Credit and Service Cooperative (CCS), which is a legal partnership mode from the 1960ies, that unifies farmland owners and users. Farmers submit an application for **membership**, which is examined and accepted by the cooperative's general assembly (main decision making body). Farmers produce predominantly a large variety of vegetables and fruits for the local markets, for public canteens in schools, hospitals and other public organizations.

The **citizens** in the neighborhood use a local selling point.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality, research institutes**)

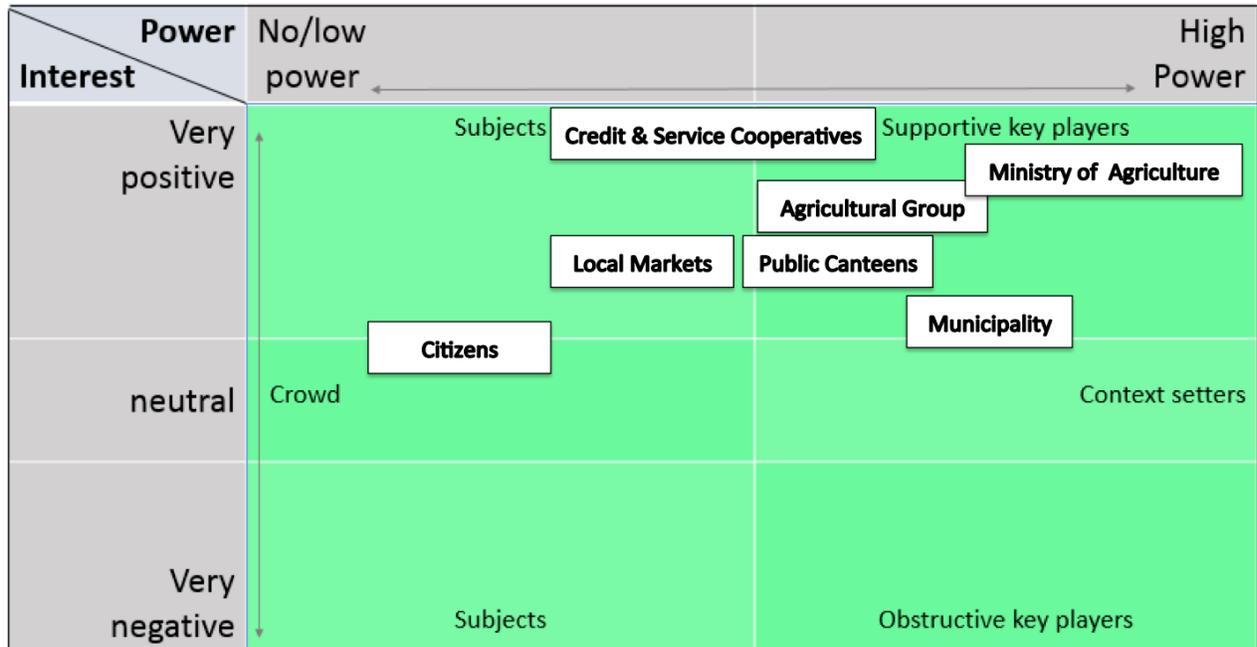


Havana ECS IV

ECS IV was founded by a cooperation of farmers to process fruits and vegetables in harvest peaks when the market cannot buy all products. The “Mini-industria” is collectively owned and managed by the person in charge. Consequently, the local **Credit and Service Cooperative** supports the ECS IV with technical assistance, distribution of products and acquisition of agricultural inputs, seed, fuels and equipment.

There is a high demand on ECS products from **public canteens, citizens** and **local markets**, no storage is needed.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality**)



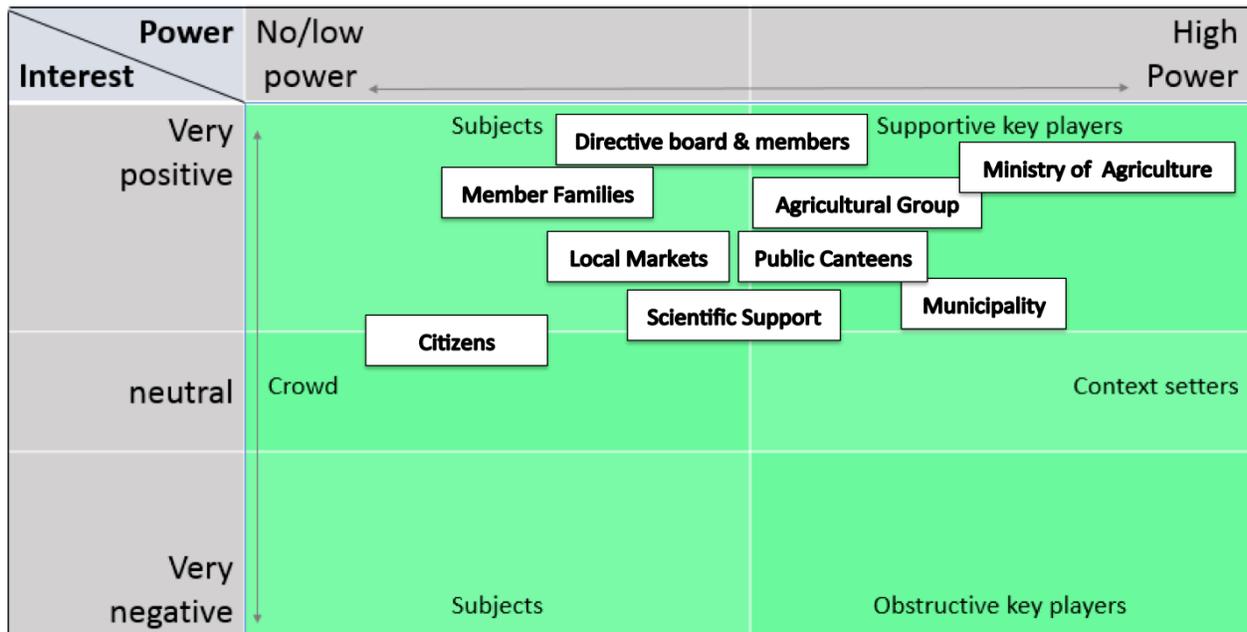
Havana ECS V

ECS VI is also a Credit and Service Cooperative with similar stakeholder constellations.

The **Directive board** is the main managing authority of the Credit and Service Cooperative (CCS), which unifies farmland owners and users. Farmers submit an application for **membership**, which is examined and accepted by the cooperative's general assembly (main decision making body). Farmers produce predominantly a large variety of vegetables and fruits for the local markets, for public canteens in schools, hospitals and other public organizations.

The **citizens** in the neighborhood use a local selling point.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality, research institutes**)

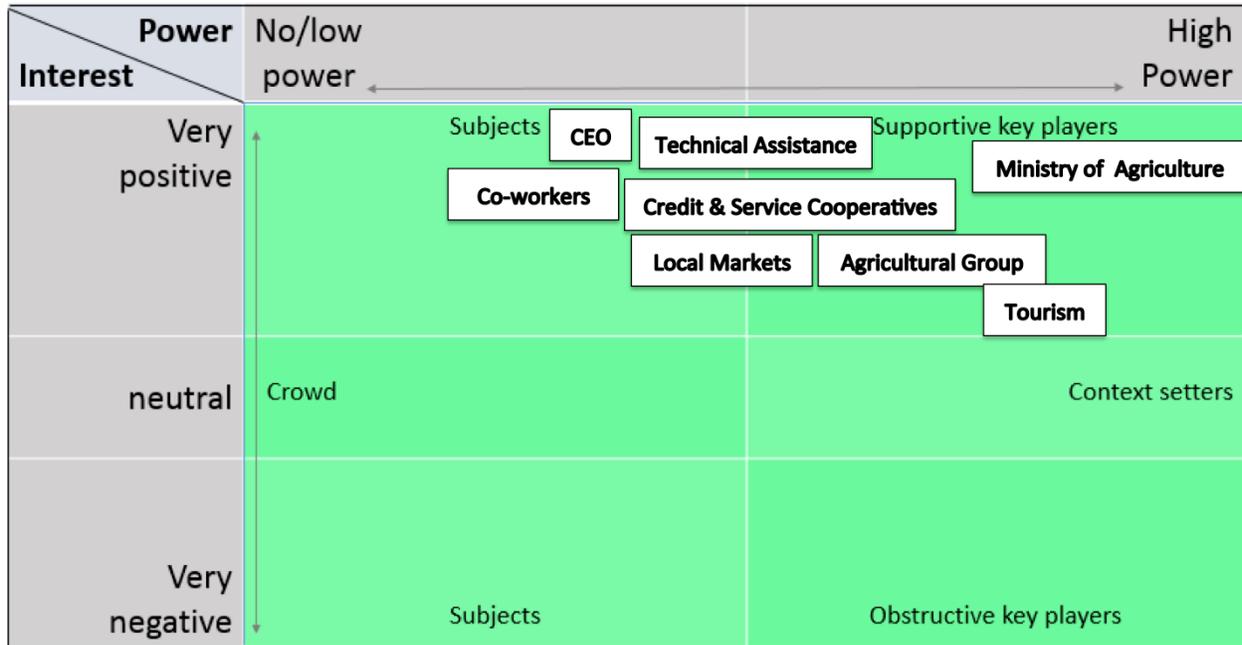


Havana ECS VI

The farm is owned by a young man (**CEO**). He employs seasonal **co-workers** and gets **technical assistance** if needed and produces mainly flowers for the **local market** and **tourism**.

Credit and Service Cooperative supports the farmer with technical assistance, distribution of products and acquisition of agricultural inputs, seed, fuels and equipment.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group**)



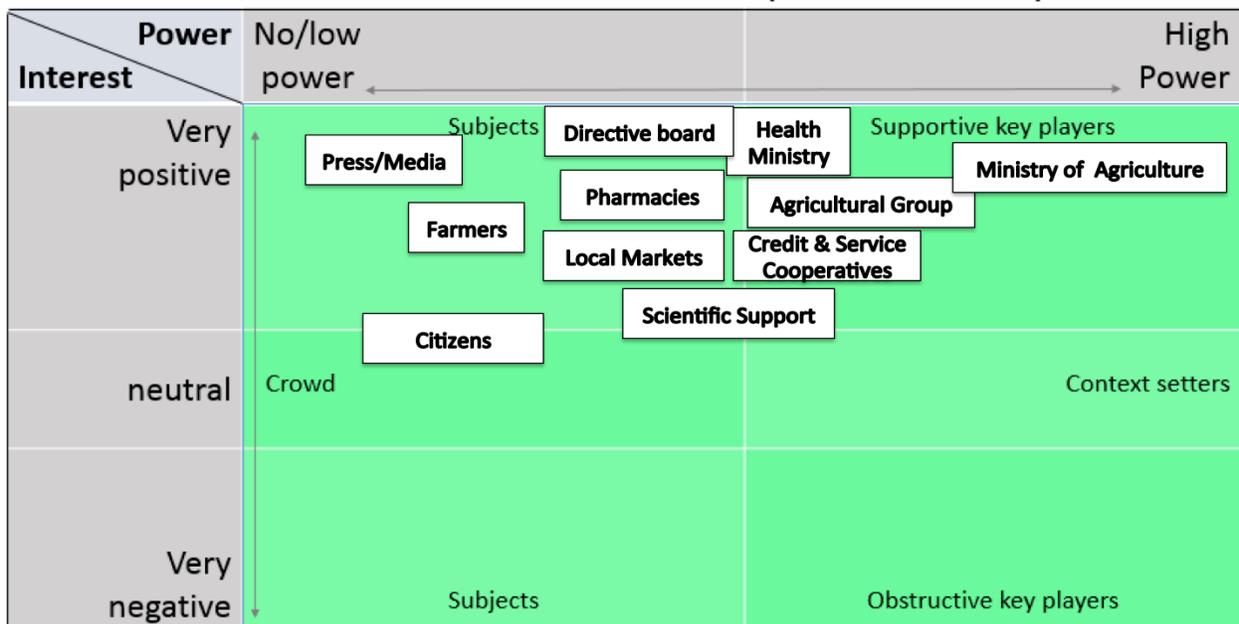
Havana ECS VII

The ECS produces and processes medicinal herbs for all **pharmacies** of Havana and beyond. Demand and production is coordinated by the **Directive** of the enterprise and the **Ministry of Health** and follows the demands of the local pharmacies.

Scientific support is provided by different institutions concerning quality assurance and safety. Herbs are partially grown up on the site of the enterprise but are also provided by other local **farmers** and **cooperatives**.

He employs seasonal **co-workers** and gets **technical assistance** if needed and produces mainly flowers for the **local market** and **tourism**. Citizens of Havana frequently use medicinal herbs. **Press and Media** highly support use and disseminate knowledge of use.

Several governmental organizations are supporting strongly the production of medicinal plants to substitute chemistry pharma products (i.e. **Agricultural Ministry, Agricultural Group, Ministry of Health**).



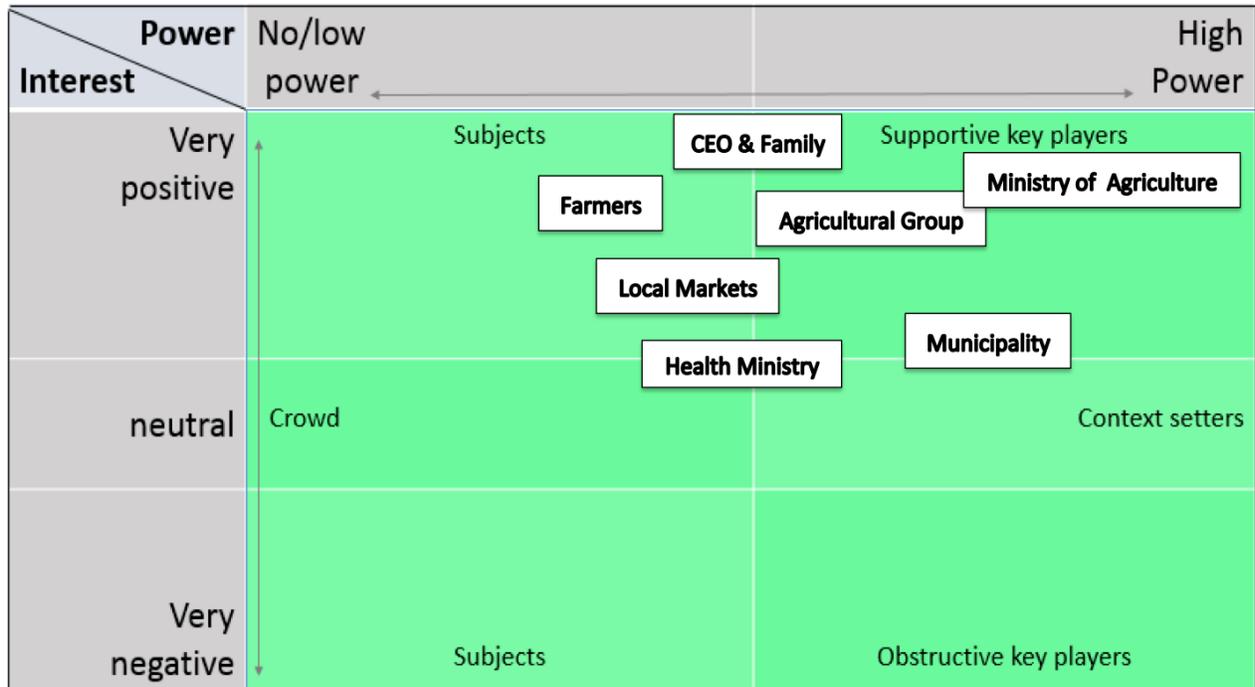
Havana ECS VIII

ECS VIII is owned and managed by a **family**, which has 20 salaried employees. This “Mini-industria” process fruits and vegetables in harvest peaks and seeks also to add value during processing (e.g. producing ketchup, lemon juice).

Local **Farmers** send fruits and vegetables for further processing to the ECS.

There is a high demand on ECS products from **local markets** and no storage is needed.

In general, governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality**). The **Health Ministry** checks regularly sanitary quality.



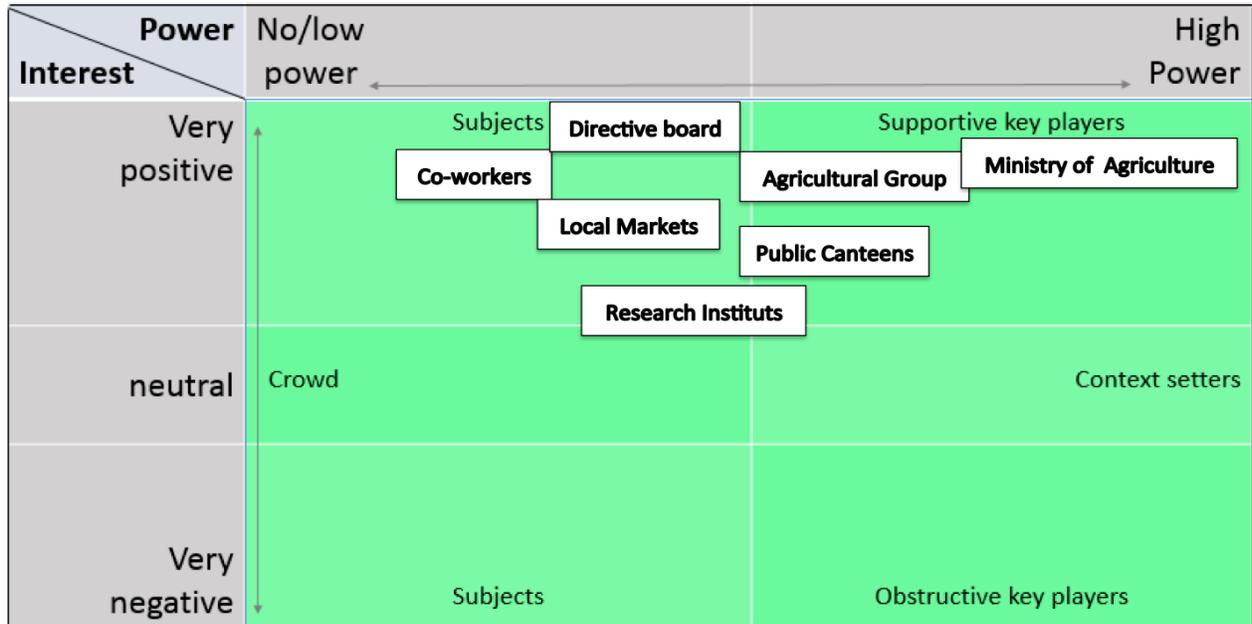
Havana ECS IX

The farm is managed by an economic **directive board** and has 30 salaried employees and produces mainly fruits and vegetables.

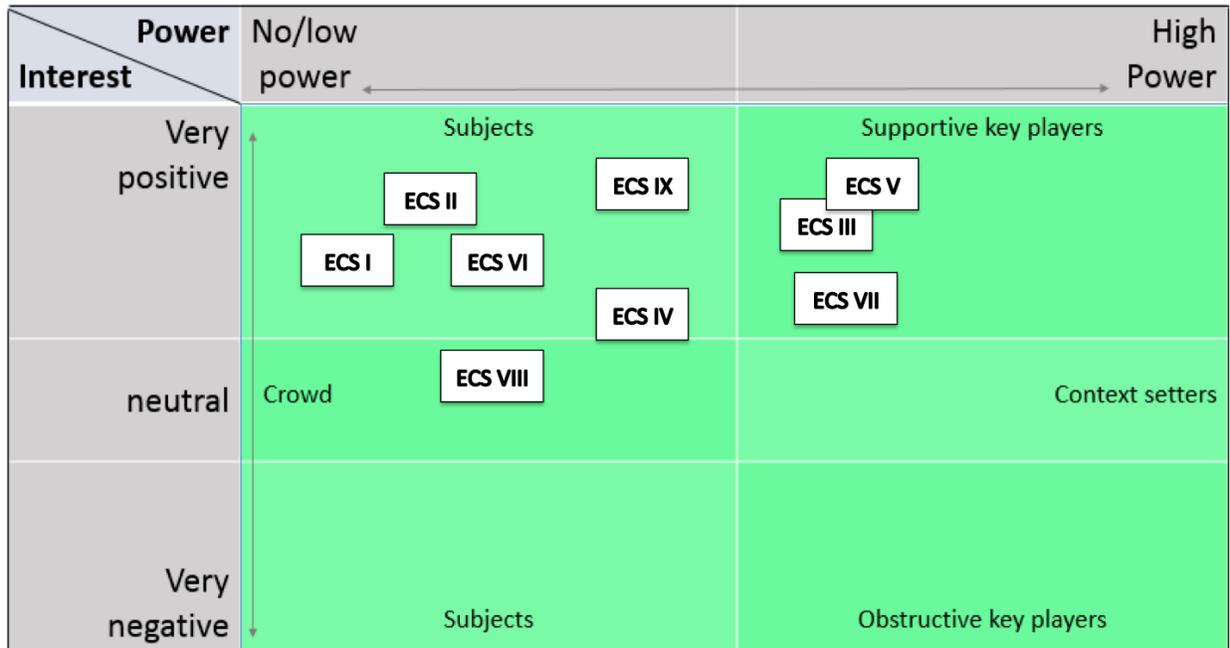
There is a high demand on ECS products from **public canteens** and **local markets**.

Several governmental organizations are supporting strongly urban agriculture (i.e. **Agricultural Ministry, Agricultural Group, Municipality**).

Research institutes are highly dedicated to provide expertise and to share new results.



All ECSs in Havana in one map



3. Analysis and conclusions

In the tables below, we focus on formulating the conclusions on the similarities and differences between the researched ECS-initiatives. Further on in the text, on the basis of the similarities and differences, we focus on categorizing the ECS-initiatives.

3.1 Common characteristics of the analyzed ECS

Summary table 2: Overview table on common characteristics across the case studies analyzed.

| | Common characteristics |
|-------------------------------|--|
| Activities | Urban food production often related to principles of organic food production and of close loops of resources. Successful ECS-initiatives often have a diverse portfolio of services beyond food production, most frequent are the provision of services for environmental education like workshops and courses. Initiatives that focus on classical activities of food production and processing are struggling more compared to the ECS with broad portfolio, except the ECS in Havana, that are predominantly produce food for the local market. |
| Governance | Collaborative modes of governance and decision making dominate, even in Havana cooperations of farmers are the most often used governance modes. |
| Funding | ECS-initiatives often depend on public support and funding, few are self-sustaining. ECS in Havana are receiving a strong systemic support, that seems to be more effective than monetary subsidies. |
| Duration | Fragile, few are long lasting due to project based funding and/or weak position in the market, those with a wide supporting network and wide range of products survive longer. |
| Members | tend to be intrinsically self-motivated within the public-societal domain. This seems to change in successful ECS with a larger number of employees, there we find a wider range of motivations and often less altruistic. |
| Position initiator | Initiator is regularly a partner, often taking the final decision/resolution and responsibility. |
| Goal orientation | Mostly social goals with tendency to self-empowerment and interest in nature and environment, except the ECS in Havana. |
| Enabling goal oriented action | These are rather diverse. |
| Action mode | Actions primarily order-driven, or project/needs-driven actions. |
| Organisational mode | Bottom -up and lateral hierarchies. |

3.2 Main differences of the analyzed ECS

Summary Table 3: Overview table on main differences across the case studies analyzed:

| | Main differences |
|-------------------------------|---|
| Activities | Divergent from classical fruit and vegetable farming, insect- and fungi farming, free food provision for food bank, to premium priced food sales, and from historical farm revitalization to demonstration place for water retention. |
| Governance | Governance differs widely between ECS-initiatives depending on ownership and maturity. |
| Funding | The approach to self-sustaining the own ECS varies and shows different approaches in understanding whether a city should support an ECS initiative or not. The more successful ECS use a at least two-track strategy (e.g. fundraising, social entrepreneurship and/or development of business models for local markets). |
| Duration | Some projects already last a decade, many way shorter, but a subgroup is old namely when including traditional kitchen garden initiatives. |
| Members | Initiators vary from societal outsiders to highly educated persons. Other members and their roles vary. Also in Havana initiators and members of the ECS have different origins, some have farming backgrounds in their family others not. |
| Position initiator | May be a temporary contracted developer, but often hold a lasting involvement. |
| Goal orientation | Selling produce or services may be considered important, but often only minor, instrumental to other goals, except in Havana, here in 8 of 9 case studies the food supply for the population pre-dominates other goals |
| Enabling goal oriented action | Very diverse orientations from oriented at customers or buyers, till focus on principals and funders. |
| Action mode | Initiatives are triggered into action by a diverse set of triggers. |
| Organisation mode | Although initiatives are organized predominantly on collaboration, other organizational structures are present. |

3.3 Lessons learned from the ECS-initiatives in FRC

In Rotterdam and Oslo many ECS-initiatives working on social and environmental issues find it hard to survive, as they find it challenging to develop a product or service that is not too costly. It seems difficult to have neighborhoods taking an interest in ECS, let alone becoming a supportive key stakeholder backing up an initiative. Nevertheless, firm anchoring of the initiative into the local neighborhood seems a key factor for successful ECS. Even those initiatives that prioritize commercial activities often find potential

clients nearby, who nevertheless have a very low willingness to pay premium prices for the produce or services.

The reasons for the low willingness to pay a premium are either the perception that these activities are not-for-profit, hobby-based, while on the other hand they find competitive prices of retail and markets nearby. Evidence from economic psychology shows that structural changes and shifts in consuming patterns, so-called novel user-pathways, are hard to realize (Ajzen, 1991). We currently experience this when advocating for changing agricultural governance. Reasons for this slow movement in society towards new food production patterns and infrastructures are food marketing, claiming safe and healthy agricultural activities in the countryside, and the perception that food is healthier coming from a specialized production location (Köcher, 2009). Thus, urban gardening and urban farming is primarily considered a spare-time or at best part-time activity, still not a full time profession that should provide a regular income. All services related to this seem to be considered as voluntary and “nice-to have” actions.

Some of the Berlin ECS examples are already well established at local markets and continuing to expand their area of influence (ECS I and ECS VI). These initiatives have dealt with business models, social entrepreneur concepts and have actively sought support in the development of their initiatives. Other ECS are rather reluctant to develop economically sustainable business models, even though they recognize that their often precarious employment relationships and high staff turnover are closely linked to this (see below). Regarding the EdiCitNet Business Consulting Team (see Del. 6.4) there is great potential in Berlin to overcome inhibition and to assist transform the existing know-how and motivation into successful business models, that serve to enhance the working conditions and perspectives of ECS members.

We have interviewed ECS in Berlin that were awarded several times. Those that were winning awards related with consultancy and mentoring offers, where better established than those that gained only a project or financial support. The later often resulted in up’s and down’s of co-worker and unstable job positions. Employment and limited budget to provide fair salaries is often a problem between idealistic principles and real-life settings of the ECS. The need for mentoring/guidance on the cooperation with social banking was mentioned. Interestingly, products from ECS that succeed in becoming established generally are not officially labeled as organic food, due to the high certification costs. ECS that focus on the establishment of niche products (e.g. product based on insects, mushrooms) struggle with the product acceptance in the market. This confirms the issue of facing inert user-pathways for healthy foodstuffs and food security. Assistance in navigating in uncertain or unclear legal framework concerning food production was mentioned often as a barrier. Consequently, successful ECS established services beyond the food business often in partnerships with public institutions such as schools, kindergartens etc.

In general, in Berlin there is a market potential for ECS products, which has already been successfully used by former startups and which today are part of the standard range of large supermarket chains (e.g. infarm, ECS Farm²). Both ECS were not part of the study, but already shared experiences with the EdiCitNet project. Large food discounters are open to local ECS products, but ECS have to be able to deliver constant and large amounts of the products.

² www.infarm.com; www.ecf-farm.com; different apiculture ECS also sale their products in supermarkets.

ECS, or more general 'green' activities, may be instrumental to pursue other environmental or societal goals. Amongst multiple goals, edible green is not always the prioritized goal of the initiators and financiers; other societal goals like climate, poverty, job experience, or water retention can be considered more important goals. For example, on the one hand, green activities may be used to hire people with a handicap or include demographic groups that often end up outside the ordinary labor market like at-risk youth (i.e. NGO Oslo Living Lab) and illegal residents, or it may be used to create a sense of environmental awareness (i.e. ByBi - Oslo's urban beekeepers) or community (i.e. Dr. Dedichens Drivhus). On the other hand, the development also shows a strong development towards enhancing green gentrification aiming at well-being and educational effects in higher educated families.

The role of partnerships with big players of food or environmental sector (e.g. supermarket chains) was evaluated ambiguously and have been used as a strategy, among others, by some ECS. In general, regional partnerships and co-financing approaches are more sustainable than short term campaigns with big players. This might be related that the ECS have normally not the personal to care those partnerships with big players in a longer term.

The existing diversity and number of real implementations of ECS in Andernach is, considering the size of the city, impressive and quite comparable to other popular edible cities. In contrast to many other cities in the world where edible cities develop as part of a bottom-up movement, the concept of the edible city of Andernach has been planned from the beginning by the city administration and has therefore been quickly and successfully implemented. As part of a larger marketing strategy, it has been attracting many visitors since years. However, the diversity of the real existing independent and mutually inspiring initiatives and companies has not been able to develop adequately through a top-down approach.

With the central anchoring of the Edible City Approach and ECS implementation at the Municipality level in Andernach, direct interventions relate mainly to an important city owned company. However, volunteer work is not a prerequisite for sustainable success and the ECS stakeholder landscape differs largely from Oslo and Rotterdam. The public company trains unemployed people in urban gardening activities. These trainees ("clients") are recipients of public transfer payments and do not get a salary paid by the company. Consequently, the services of edible green space maintenance and care are always much cheaper than the services of a standard green maintenance companies, and the current need to refinancing costs by commercial activities is low. However, to a minor extent there are some selling activities of ECS products (e.g. vegetables, herbs, honey, eggs) in the city. Both the Job center and the municipality have a win-win situation with the ECS. Local citizens beyond the trainees, benefit from a high quality of edible green spaces, but do not become actively involved. The participation in ECS activities are used by schools and kindergartens in environmental education programs.

The economic situation in Havana is largely different from our other FRC. ECS in Havana are supported strongly by a wide range of strategies and measures. The market uptake of the products is assured. Cooperatives as the organizational backbone of the small-scale urban farmers are crucial to become self-sustaining. A Credit and Service Cooperative is legal partnership mode from the 1960ies, that unifies farmland owners and users. Farmers submit an application for membership, which is examined and accepted by the cooperative's general assembly. In general, farmers produce a large variety of vegetables

and fruits for the local markets, for public canteens in schools, hospitals and other public organizations. Farmers own or use areas between 0,2 and 3 ha. The cooperative supports farmers with technical assistance, distribution of products and acquisition of agricultural inputs, seed, fuels, equipment.

In Oslo and Rotterdam, interviewees were rather busy with acquiring funds for investments or for structural operations. This holds partially also for some of the Berlin ECS (see also Scharf et al. 2019). Interestingly, while some consider this search for funds as inconvenient and a waste of time, others seem to take it as a normal part of the job. The former typically consider changes in preferences in politics and (private) funds as unpleasant surprises, while the latter seem to take advantage of the diversity of funds available at different moments in time in different 'regimes'. Others accept their destiny and show patience in developing their idea, and take good examples as a role model for their own career. In nearly all cases the aim was to be self-sustained and independent from subsidies and external support.

Some of the interviewees were neglecting the need to develop a business model or were rather reserved about the development of business models. This is an important challenge for the EdiCitNet Business Consulting Team (see Del. D6.4)

Evidently, the initiatives are at different degrees of maturity, with niche stability at a small scale for some, while signaling that an ECS is endangered sooner or later by others. Most initiatives find it hard to become established in traditional food systems (restaurants, catering, retail). However, successful examples exist; some ECS are able to insert their products in the local supermarkets or sell directly to hotels and canteens, and use offensive marketing of their ECS produce. An important consideration is also to know the national rules to ensure that the ECS products meet the standards (according to the Food Safety Authorities). Some of the ECS that we interviewed struggle with this.

The ambitions and competence in sustainable procurement are low in (public) organizations. Conflicting partial interests are commonplace, with pleas from leaders for more sustainable products, that tend to be more costly, and procurement officers that opt for low prices.

Funding opportunities for innovation in food production are directly and indirectly limited to the rural agricultural sector, associated with rural or agricultural development policies, and coordinated by the Ministries that oversee Agriculture and Food production. To facilitate the development of a significant urban food sector, cities need to look at city-based funding strategies for startups in ECS.

Cooperative modes are often used within ECS in the European FRC, but there is no cooperation or association beyond the single organisation for ECS lobbying and policy negotiations. Several ECS recognized this as important to overcome fragility, fragmentation and non-sustaining modes of operation.

We should recognize the differentiation of stakeholders to enable reaching the goals: from 2 to 10-12 stakeholders. In Rotterdam, the "Food forest"-initiative are on shielded off locations owned by individual private partners, strongly reducing the number of stakeholders involved per location. An initiative with two stakeholders are e.g. the "Urban Agriculture" projects which have a semi-public commissioner (housing cooperative) and the local residents (as volunteers and users). This holds true as well for the "Hofbogen", which also has the government as its commissioner and volunteers as worker and user. In strong contrast, the "Foodgarden" manages a large number and a wide range of stakeholders, with the

aim to stay in charge of its own future. Finally, “Natuur talent” has many stakeholders in the form of companies with which they cooperate, the commissioners (government, health care organizations), the volunteers etc. Real estate cooperatives are recognized as crucial binding partners in classical community garden projects in residential areas of Berlin.

When moving to contrasting positions Oslo and Rotterdam do seem to differ on several interesting items. In Oslo, ECS seem more explicitly market-based (i.e. Tåsen Microgreens and Gruten³) and youth oriented (i.e. Lif Laga and Oslo Living Lab), while in Rotterdam funding opportunities seem to orient ECS (relatively) more at labor market issues (Talent for Nature), and health recovery contracts (Food Garden). An interesting learning from Oslo for Rotterdam may be the membership format pursued in Oslo (Dr. Dedichens Drivhus and Tveten CSA) ensuring (some) income, and participation of families. But if the price is too high, families with low economic resources will not participate. A combination of CSA shares and community gardens to grow food attract different audiences (low threshold for participation). This was suggested by several ECS we interviewed in order to ensure participation from different socioeconomic backgrounds. On the other hand, an interesting observation from Rotterdam for Oslo may be the serial entrepreneurship (Food forests), and the grouping of ECS (Roffabriek, Talentfabriek010) taking place in Rotterdam. Such practices exploit tacit knowledge and competences of initiators, respectively benefits from lower negotiation and enforcement costs.

However, the Berlin ECS studied here, represent a wider range of ECS types along the whole value chain compared to Oslo and Rotterdam and selection was not restricted to urban gardening initiatives (i.e. only one classical community garden initiative was among the case studies).

A well-known example for successfully bringing ECS in business is the SME Rotterdam Zwam⁴. This ECS is an urban farming business awarded more than six times. The business concept is to re-use local coffee waste to cultivate mushrooms in the abandoned building of the former swimming pool ‘Tropicana’. Because of the business success, demand increases, they had to look for ways to increase production capacity. A circular community platform for start-up initiatives was created focusing on green circular economy. Today, the ‘Blue city’ platform provides start-ups with opportunities to exchange and to work out ideas on waste streams.

In Rotterdam, there was a need to distinguish between individual locations of ECS, and entrepreneurs or initiators of ECS active on several spots in the region. In Rotterdam, interviews were held on site. There a number of interviewees have been or are active at several locations for ECS. For example, Urban Agriculture-developer Caroline Zeevat referred to a series of commissioned urban greening-projects that she had realized in Rotterdam and The Hague.

In Oslo, the institutional support for start-ups (nationally and regionally) has a strong focus on sustainable products and services and expects a triple bottom line as part of the business plan. However, the funding

³ In Oslo, Tåsen Microgreens and Gruten are the most successful (self-sustained and independent) ECS businesses we interviewed. They have a more Prosperity-Planet orientation. However, the ECS we interviewed that have a more People (social) orientation like Dr. Dedichen Drivhus or Oslo Living Lab are very dependent on public support and funding.

⁴ <https://www.rotterzwam.nl/>

is basically aimed at high-tech solutions with ambitions for “going global” and scaling-up. Low-tech or more local or organic solutions whose ambitions are local rather than global find little support in these structures.

Finally, Oslo’s location and cold climate means that many ECS business ideas are unable to provide year-round employment and produce. Growing plants in greenhouses helps to make the growing season longer, but still it is difficult to create year-round employment. The combination of both outdoor and indoor growing can provide year-round employment and produce. This is, though for a smaller degree, also valid for nearby countries like Germany, the Netherlands, and the UK.

Beside the dominating public ECS company in Andernach, there are small but mature companies established (ECS 2, 4) with the municipality as key customer for the green products (ECS 2) or developed based on the enthusiastic employees of the ECS, that develop among others local food projects (ECS4). Other initiatives are based on spare time activities of enthusiastic local people (ECS 3, 5, 6). Some ECS struggle for establishment in the market and up to now based on the support of its own family (ECS 6), whereas others aim to keep the volunteer-based approach.

3.4 Grouping ECS

Having presented initial cross-sectional observations of the ECS-initiatives and businesses and using the classifying tables, we recognized a larger theme concerning the divergence of orientations of the ECS, namely between governmental or government-oriented, versus civil society oriented, versus private or commercially oriented. We concluded that civil-society oriented projects were, by and large, quite different from more private oriented projects and both differ from municipality-oriented projects. Civil society-oriented projects seem to claim that they substitute for the government and its traditional tasks. They try to get projects funded that aim at the Grand challenges; longer term goals (climate, poverty, green in the city, cohesion). The networks seem small, and governmental stakeholders seem to be prominent.

From Tveten CSA (Oslo), Hofbogen (Rotterdam) and ECS VI in Berlin we learn that the activity ‘through gardening strengthens social cohesion in a neighborhood’ is coherent with their civil society aim (that is social cohesion), and project requirements. At Hofbogen volunteers have frequent turns in their garden work, there is no sales of produce, but it is given away. This orientation is reflected in the role and interest of the municipality (funding of the project on the basis of the goal societal cohesion), and the role of citizens as volunteers who actually enact and through their joint gardening develop the social cohesion. The citizens, being related directly to the success of the project, seem to be a powerful group. The Tveten CSA promotes joint gardening, and aims at increasing social cohesion. Citizens seem to be strongly involved in the CSA, as they own shares in the garden. The municipality supports the CSA by allowing gardening activities on their land.

Private or commercially oriented projects look for diverse funding streams (sponsors, product sales, services). They build networks that include (a range of) businesses. Tåsen Microgreens, Gruten, *Natuur talent*, ECS IV, V and VI in Berlin, and the Food garden suit this orientation when it comes to societal goals, the involvement of volunteers/citizens, and the role and interest of stakeholders. This set of

initiatives have it that goal orientation is commercial, contributing to public and societal goals, enabled by customers' preferences (catering, restaurants, health care organizations, etc.). These initiatives appreciate pay for executed activities. Volunteers (or interns) contribute to the commercial activity and goal of the initiative. The role of the government or city administration in these projects is not primarily supportive, as the initiative is dependent on selling their produce, or trading their services (e.g. renting meeting places). The government may be a commissioner or customer as typical for the ECS-initiatives *Natuurtuin* and *Natuurtalent*.

Due to the small scale of the city and the central approach, Andernach's municipality is strongly linked to almost all ECS and supports bottom up initiatives (including also commercially oriented ECS) as buyer or with other cooperation activities. The existing ECS are often government-oriented or civil society oriented and the idea and the possibility to generate independent businesses and jobs with ECS is still quite new in the Andernach context and therefore in the making. Regarding the Business Consulting Team (see Del. 6.4) there is great potential in Andernach to transform the existing know-how and motivation into successful business models.

Governmental-oriented ECS projects in Oslo and Rotterdam take public goals as their main issue (education, nature conservation), for which they negotiate a budget and support. The projects are open to the general public, but the initiators identify themselves as part of authorities. The Rotterdam garden De Enk, holds as their goal education on nature and the environment to school children, and others. Simultaneously, this garden provides green space for inhabitants in the neighborhood. It used to be fully owned by and integrated in the Rotterdam authority. De Enk is driven by implementing municipality-decided public policies, build on organizational procedures. The coordinating person was formerly paid by the municipality, but more recently the coordinator is paid by the educational-garden umbrella-foundation *Natuurstad*, organizationally somewhat independently ('at a distance') of the municipality. This foundation, but formerly the municipality, is the dominant stakeholder group in the related network. Citizens legitimize the public funding of this initiative by their participation and their visits.

4. Overall Conclusions

Overall our conclusion is that ECS-initiatives can be described as social entrepreneurs or micro scale SMEs, many of which find it hard to secure continuity if not expect to be successful. They all seem to aim (partially) at a social impact on society by means of their urban, green activities which incorporate a level of solution to a certain societal problem as described in EdiCitNet (under the broad umbrella of sustainability goals). The various ECS which were explored in a first interview showed the variety of solutions provided along the value chain. All these and additional solutions are considered to be ECS and should be incorporated in the huge EdiCitNet network to provide a platform for knowledge exchange on very different levels. The green can be cultivated e.g. to produce ingredients for food which can be sold or to give away (e.g. to food banks), or to employ people in the process to re-integrate in society, or to create a green space in an urban environment for local residents to enjoy, and or it can support water management. 'Green' is thus a vehicle for the involved social entrepreneurs to achieve or contribute to their intended social impact. Many ECS look at the municipality as an important stakeholder, but for some it is a critical stakeholder, while for others it is merely a commissioner, or one of many stakeholders at par. ECS-initiatives may be directed towards contributing to the solution of grand or local challenges, however they are organized as projects. The environment of ECS-initiatives can be characterized by acknowledgement of and taking up the grand challenges (on e.g. climate, environment, urbanization, poverty) and a retreating government which recognizes its limitation to take up societal tasks and assumes citizens and organizations to take responsibility in this as well. This brings a paradox: grand challenges are typically issues to be dealt with in the longer term, whilst projects have a shorter term life span. From this paradox perspective we understand ECS-initiatives to represent answers to how to organize activities which should contribute to longer term grand challenges however are restricted to the organizational format of a, by definition, shorter term project. It requires a further dive into the practices to find out what business model practices promote the continuity and success of specific ECS-initiatives.

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Rotterdam ECS case studies in comparison

| | Food forest | Food garden Voedseltuin | Urban Agriculture | Natuur talent | De Enk Garden | Rotterdamse Munt | De Dakakker | Hofbogen |
|------------|--|--|---|--|--|--|--|--|
| Activities | Develop and maintain food forest; educational activities | Grow environmentally friendly vegetables; employ people with distance to labor market; develop collaborations between social enterprises | Project developer on introducing green in a urban environment also related to social cohesion | Neighborhood social enterprise to support start-up entrepreneurs with a distance to the labor market (now 11 firms); Part of association of 5 neighborhood social enterprises. | Maintaining educational garden for guided (school) tours, green space in the neighborhood with all kinds of activities organized for local residents | Develop and maintain a city garden; selling vegetables, herbs from own garden + selling products of others in their shops (physical and via internet); employ people with a distance to job market | Project started by Milieucentrum Rotterdam to evidence that technologically water storage can be done via roofs. Initiator holds its activity to strengthen positions of citizens in green initiatives by pointing politicians at it, raising public funds to support the citizens | On initiation of the municipality to strengthen the social cohesion, participation of local residents by means of a garden |
| Governance | Aiming for market; R&D stage | Contract based | Requirements sponsor housing cooperative | Contract based | Semipublic frame and regulations | Market and contract based | Within public frame | Within the public, societal frame of the project |

| | Food forest | Food garden Voedseltuिन | Urban Agriculture | Natuur talent | De Enk Garden | Rotterdamse Munt | De Dakakker | Hofbogen |
|----------|---|---|---|---|---|--|--|---|
| Funding | Out of own pocket (?); supported by care home by giving land for free | Assignments, subsidies (for special activities; both public and private sponsors) | Project sponsoring housing cooperative | Contribution of 11 entrepreneurs, employing people with a distance to the labor market; revenue of catering, renting meeting rooms | Structural semipublic funding | Ad hoc funding municipality (e.g. for moving to a new location), employing people with a distance to the labor market, sales of fresh and processed produce. | Ad hoc (semi) public funding | municipality |
| Duration | Undetermined; dependent on the care home | Determined by the success of companies selling their product/services | Short term limited by the project funding | Determined by the success of contributing enterprises, and selling the products, services | Undetermined, depending on the semi-public organization | Determined by the success of their commercial activities | Ad hoc; Determined by politicians | Short term; project based |
| Members | Care home board, volunteers, initiator | Public and semi-public principals; occasionally sponsors; partners in collaboration of social enterprises | Housing cooperative, local residents | Public and semi-public principals and occasionally sponsors; partners in collaboration of social enterprises; included entrepreneurs; local residents | Board of semi-public organization, volunteers | Board of the R'damse munt, volunteers, health care organizations | Milieucentrum, politicians, civil servants, citizens | Municipality, green food (co-initiators of the idea to develop Hofbogen as a means for social cohesion) |

| | Food forest | Food garden Voedseltuin | Urban Agriculture | Natuurtalent | De Enk Garden | Rotterdamse Munt | De Dakakker | Hofbogen |
|-------------------------------|--|--|---|---|---|---|--------------------------------|--|
| Position initiator | Networker | Partner | Partner, networker | Partner, networker | Affiliated to semi- public organization | networker | networker | networker |
| Goal orientation | Commercial | Commercial | Goals of housing cooperative plus own vision | Commercial | Public goals | commercial | Public, broadly societal aim | Public societal aim |
| Enabling goal oriented action | Future; Principal has the say (now exploring markets) | Principals requirements | Sponsors requirements | Principals requirements, customers | Procedures and discretionary capability | Customers, principal requirements | Citizens needs for green space | Project requirements |
| Action mode | Future; order driven (now exploring markets) blended with own ideas/ideals | Order driven; pick plug and play with social enterprise partners | Sponsor driven | Order driven; occasionally tapping into sponsor resources | Policy implementation | Order driven; occasionally special project funding from (semi) public party | Need driven | Project driven satisfying citizens needs |
| Organisation mode | Future firm's collaboration | Collaboration | Collaboration and movement (to be carried by residents) | Collaboration | Executive organization | Collaboration | N.A. | Carried by citizens |

Oslo ECS case studies in comparison

| | Linderud Manor | Tveten CSA | Lif Laga | Oslo Living Lab | Herbanists | Onkel Trolls Spiskamme | Gruten | Tåsen Microgreens | Bybi | Dr. Dedichens Drivhus |
|------------|--|---|--|--|--|--|---|--|--|--|
| Activities | Planning establishment of a CSA to grow vegetables together; create a sense of community. Offer tours on its historic gardens + main building; organize family activities and community events | Vegetable production and beekeeping | Apple picking and selling apple juice by youth; participation on community events | Entrepreneurship youth program focusing on urban food production (rooftop farming) and circular innovation (plastic and food waste); organization and participation in community events. | Growing herbs and edible flowers in the first edible park in Oslo. Sell the produce; courses and workshops; activities for volunteers in the garden. | Transfers edible plants from the forest into gourmet produce; sells them via internet, regular shops and markets; workshops on forest-based ingredients. | Transfers coffee grounds into new products (soap and body scrubs; grow oyster mushrooms, etc); workshops and courses; awareness of coffee ground being a valuable raw material. | Production of local microgreens for restaurants, canteens, etc.; distributes mainly themselves directly to costumes. | Urban beekeeping association and environmental organization; sell honey from their apiaries; workshops and courses; participation in community events and conferences. | Grow vegetables and edible plants by locals, schools, etc.; organize community events and family activities; create a social meeting place; engage in the development of the area. |
| Governance | Semi-public (part of the Museums of Akershus) | Kind of cooperative; selling shares; certain rules for member contributions | Civil society based (shared norms, values of benefiting the community such as entrepreneurship and food waste) | Civil society based (shared norms, values on creating inclusive jobs for groups often ending outside common labor market. Within frame Nabolagshager social enterprise) | Market based | Market based | Market based | Market based | Civil society based (shared norms, values on the importance of insects and biodiversity in cities). | Civil society based (shared norms and values on building a sense of community) |

| | Linderud Manor | Tveten CSA | Lif Laga | Oslo Living Lab | Herbanists | Onkel Trolls Spiskamme | Gruuten | Tåsen Microgreens | Bybi | Dr. Dedichens Drivhus |
|----------|--|--|--|--|---|----------------------------|---|---|---|---|
| Funding | Ad hoc c funding (agency for urban environment); private foundations /donors for organizing community events and activities. | Members pay for their share, municipality owns the land and allows activities. | Oslo municipality pays social worker, who is project coordinator; earning money by selling apple juice; private foundations/d onors for equipment; shopping center gave free space to sell products; private owners allow youth to pick apples in their garden | Sharing materials and some personnel with Nabolagshager; Municipality funds to employ youth-at-risk and media coverage; private foundations for ad hoc activities. | Buyers; Some public funding to organize activities for volunteers in the garden | Buyers | Buyers; Municipality and private f funding to support testing of prototypes and media coverage. | Buyers; support from governmental institution Innovation Norway; welfare agency support in hiring people. | Municipality and private donors for developing apiaries and educational projects; sell honey and other honey related products; support by the Norwegian n Beekeepers Association beekeepers association | Members contribution to the association (10e/year; very low to ensure participation); sell plants; Alna district pays rent; municipality funding; institutional and private organizations fund activities |
| Duration | Determined by Museum policy | Determine d by municipality; activities carried by members contribution. | Determined by policy municipality (pays coordinator), attention of volunteering youth, and of private owners apple trees | Depends on the policy of Nabolagshager; dependent on public funding and private foundations | Based on company's success | Based on company's success | Based on company's success | Based on company's success | Dependent on public funding and private foundations; based on societal interest | Determined by funders policy; dependent on Alna district |

| | Linderud Manor | Tveten CSA | Lif Laga | Oslo Living Lab | Herbanists | Onkel Trolls Spiskamme | Gruten | Tåsen Microgreens | Bybi | Dr. Dedichens Drivhus |
|-------------------------------|--|---|--|---|------------------------------|------------------------------|--|--|--|--|
| Members | Employees museum, small local cooperation with other initiatives | Farmer / CSA manager (same person); members; volunteer in board; governmental agencies; schools | Social worker from municipality; volunteering youth; private owners apple trees; apple press company; NGO to reach youth in reception centers; schools; sports clubs | Nabolagshager; educational institute (recruitment of youth) | Four founders; volunteers | Two owners | One owner; one employee; restaurants and cafes that donate coffee grounds; | Owner; employees; restaurants that donate coffee grounds | Coordinator; volunteers; beekeepers | Volunteers; local residents; schools and kindergartens |
| Position initiator | Affiliated to Museum | Initiator was a person working for the Agency for Cultural Affairs | Initiator affiliated to municipality | bolashager initiated youth program as summer jobs program | Partners | Partners | Founder | Founder | Founder | Volunteers |
| Goal orientation | Public goal; education and community building | Public goal; community building by farming | Public goal; community building by farming | Public goal; job skills program for at-risk youth | Commercial and educational | Commercial and educational | Commercial and environmental awareness | Commercial | Commercial and environmental awareness | Public goal; community building by farming |
| Enabling goal oriented action | Citizens need | Members need for this public goal | Members' need for this action | Drive Nabolagshager to push the program | Market, consumer preferences | Market, consumer preferences | Market, consumer preferences | Market, consumer preferences | Drive for reaching their environmental goals | Drive for reaching their societal goals |

| | Linderud Manor | Tveten CSA | Lif Laga | Oslo Living Lab | Herbanists | Onkel Trolls Spiskamme | Gruten | Tåsen Microgreens | Bybi | Dr. Dedichens Drivhus |
|-------------------|---------------------|---------------------|------------------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|-----------------------|
| Action mode | Need driven | Need driven | Need driven | Driven by goals Nabolagshager | Order driven | Order driven | Order driven | Order driven | Goal driven | Goal driven |
| Organisation mode | Carried by citizens | Carried by citizens | Carried by citizens and volunteers | Organization's collaboration | Company's collaborations | Company's collaborations | Company's collaborations | Company's collaborations | Organization's collaboration; volunteers execute | Carried by volunteers |

Andernach ECS case studies in comparison

| | ECS 1 | ECS 2 | ECS 3 | ECS 4 | ECS 5 | ECS 6 |
|--------------------|---|--|--|--|---|--|
| Since | 1996 | 1994 | 2018 | 2017 | 2014 | 2005 |
| Activities | Public domain oriented, non-profit enterprise for vocational education, training and integration to foster vulnerable groups. | Green market-oriented enterprise with own research department; Production of organic fertilizer free from animal components. | Public domain oriented/informative-educational, non-profit organisation, organizes public clean-up activities to support edible Andernach, providing environmental education measures. | Commercially oriented supermarket with special focus on local produced food, retailing goods of daily use, operating in numerous green/sustainable projects e.g. free food for (homeless) people or afforestation actions. | Public domain oriented, non-profit organisation, organizing and implementation of volunteer work to strengthen biodiversity, social cohesion and Edible City awareness. | Market-oriented enterprise; Producing plant coal as soil additive or animal feed, closing resource and waste loops. |
| Stakeholder | Associated partners, municipalities, clients, customers, citizens, district administration, employees | 2 shareholder and 10 employees in total, Customers, supplier, malt factories, municipalities | Primary & secondary schools, citizens kindergartens, press, municipality, scouts, companies, employees, associations | Independent store manager, cooperative as an overarching structure, customers, large and small suppliers, local producers, regulatory agency, health department, customs, staff | Municipality, volunteers, press, schools, kindergartens, other volunteer groups, | Customers, press (public relations) competitors, municipality, lawmakers, regulation authority, family (as internal support) |

| | ECS 1 | ECS 2 | ECS 3 | ECS 4 | ECS 5 | ECS 6 |
|-----------------------------|---|---|--|--|--|--|
| Dominant Stakeholder | Municipalities mainly determine the decisions of the organisation as shareholders, job Centre (state agency) facilitate clients | The shareholders are the key players, private customers and municipalities as bulk buyers | A small organisation lives from its employees and the positive press reports, important for the implementation of projects and education measures are primary school & kindergartens | Based on a cooperative franchise system there are 2 dominant stakeholders with an independent store and the cooperative, and the customers of course | As an organisation initiated by the city, engaged members and the municipality are the most dominant players | Since the products are highly dependent on current legislation, the lawmakers and, of course, the customers (including the cities as large consumers) are beside family the dominant stakeholders. |
| Mode of Functioning | Policy based implementation | Business | Movement | Business | Policy based implementation, movement | Business |

Berlin ECS case studies in comparison

n.a.: not applicable, SE: social entrepreneur

| | ECS I | ECS II | ECSIII | ECS IV | ECS V | ECS VI | ECS VII | ECS VIII |
|------------|---|--|---|---|--|---|---|--|
| Activities | Platform for local farming products B2C | Online Shop for insect flour based products like noodles and bread | Closed loop technologies with connected food production | Several social activities with several trade-off even action for profit | Platform for Edible City products; educational and vocational trainings on ECS | Educational and vocational trainings and implementations on ECS | Social gardens and self-sustained public gardens with Cafe | Import of medically active fungi, preparation and distribution of remedies |
| Governance | Decentralized marketplaces with local project management and local steering groups in each city and peri-urban area | Private platform with only little ROI, one - person SME | Micro scale SME trade- off from public financed project | Lateral and self-sustained | Crowd project, self-sustaining platform, trainings lateral organized | Successfully established and growing SME | Lateral and non-profit | Private |
| Funding | Self-sustained by a small brokerage fee | Private, own funding | Dependent on project funding, public funding | Funding for school gardens and green and healthy actions, mostly driven by health insurance and other financing partner, socially motivated | Different sources of funding (crowd, public), fees for organisation of events | Self-sustained by selling products and services and different sources of funding (crowd, public), fees for organisation of events | Dependent from some public funding through several projects | Private, own funding |

| | ECS I | ECS II | ECSIII | ECS IV | ECS V | ECS VI | ECS VII | ECS VIII |
|-------------------------------|----------------------------|---|---|---|--|---|---|--|
| Duration | Since 2011 | Since 2016 | Since 2007 | 2010 | Since 2009 | Since 2014 | 2009 | Initiation phase |
| Members | n.a. | None | 2 | 60 | 4-10 | app. 60 | n.a. | Initiator and producers |
| Position initiator | Private CEO | CEO | CEO | CEO | CEO | CEO | CEO | Private CEO |
| Goal orientation | Upscaling of market places | Awareness rising, foundation of SME with ROI for self-sustained business and possible upscaling | Technology acceptance and self-sustainment by B2B or B2C with subsidies | Educational and social | n.a. Currently in reorientation | Upscaling and decentralized growth | Social oriented with investment in maintenance and employees | Establishing a new product on the market |
| Enabling goal oriented action | Visibility and trade-off | Awareness rising and upscaling | ROI with subsidized implementation of technology | Trade-offs for self-sustainment and less dependent on financing partner | Platform for Edible City products; educational and vocational trainings on ECS | Network and multiplier strategy, local support | Institutionalization and anchoring in the municipality as gardens for enhancing urban well-being in publicly used gardens to foster environmental effects and social cohesion in deprived areas of Berlin | n.a. |
| Action mode | Networking platform B2C | Business B2C | n.a. | Social education and B2C | Networking, knowledge sharing | Social education, Networking, knowledge sharing | Social education, Networking, knowledge sharing | n.a. |
| Organisation mode | n.a. | n.a. | SME | SE | SE | SME | SE | n.a. |

Havana ECS case studies in comparison

N.a. stands for “not applicable”.

| | ECS I | ECS II | ECS III | ECS IV | ECS V | ECS VI | ECS VII | ECS VIII | ECS IX |
|------------|--|--|---|---|---|--|--|---|---|
| Activities | Production and commercialization of vegetables and fruits | Production of vegetables and fruits and partially further processing and commercialization | Production, distribution and commercialization of vegetables and fruits | Processing and commercialization of vegetables and fruits as surplus production that cannot go directly to the markets in harvesting climax | Production, distribution and commercialization of vegetables and fruits | Production and commercialization of flowers | Production and processing of medical plants for pharmacies, hospitals and other care facilities | Processing and commercialization of vegetables and fruits | Production, distribution and commercialization of vegetables and fruits |
| Governance | Market based, decision by the farmer, support by a cooperative | Market based, decision by the garden collective | Market based, decisions on regular meetings of the general assembly or the elected board of the cooperative | Market based, decision by the farmers | Market based, decisions on regular meetings of the general assembly or the elected board of the cooperative | Market based, decision by the farmer, support by a cooperative | Market based, decision by the direction of the farm in line with directives of the ministry of public health | Market based, decision by the producers | Market based, decision by the direction of the farm |
| Funding | Support via the cooperation | Supported by agricultural ministry | Supported by agricultural ministry | Support via the cooperation | Supported by agricultural ministry | Support via the cooperation | Supported by health and agricultural ministry | Supported by agricultural ministry | Supported by agricultural ministry |

| | ECS I | ECS II | ECS III | ECS IV | ECS V | ECS VI | ECS VII | ECS VIII | ECS IX |
|-------------------------------|--|--|--|---|--|---------------------------------------|---|--|--|
| Duration | Since 2008, not limited | Not limited | Not limited | Not limited | Not limited | Not limited | Not limited | Not limited | Not limited |
| Members | Family farm with two salaried employees | Garden collective, employees in the garden and the sales stand | Farmers and their families | All farmers of the cooperation can use the facilities | Farmers and their families | Main producers and seasonal employees | Employees | Main producer, 10 employees | Employees |
| Position initiator | Main producer | Main producer | n.a. | n.a. | N.a. | Main producer | n.a. | Main producer | n.a. |
| Goal orientation | Commercial Produce income for the families | Stable public food supply and commercial | Stable public food supply and commercial | Commercial | Stable public food supply and commercial | Commercial | Stable public supply with medicinal plants and commercial | Commercial Produce income for the families | Stable public food supply and commercial |
| Enabling goal oriented action | N.a. | N.a. | N.a. | N.a. | N.a. | N.a. | N.a. | N.a. | N.a. |
| Action mode | Driven by famers goals | Driven by collective goals | Driven by collective goals | Driven by collective goals | Driven by collective goals | Driven by famers goals | Order driven | Driven by producers goals | Driven by collective goals |
| Organisation mode | Farm | Cooperative | Cooperative | Cooperative | Garden collective | Farm | SME | SME | Farm |

Annex 1 Rotterdam: Overview Interviews Edible City Solutions

This section provides in detail the stakeholder engagement per case study in the series of ECS. relevant points are the issues of the ECS (activities, goals, number of people working), identification and short description of stakeholders (profile, interests, scope of action of the stakeholder towards ECS) and their role and power position in the particular ECS project.

Maturity: vary from a) recent initiatives, b) projects struggling for continuation, and c) mature, established initiatives.

Orientations: each ECS should at least voice two objectives from the triad People, Planet, Prosperity (PPP); one may call them social, environmental and economic objectives.

Scale: variety in the core team that feels responsible for ECS-continuity: a) micro (one person), b) small (approx. 2-4 persons); and c) substantial (larger core team). They may coordinate a varying number of volunteers

| Name of the ECS-initiative or business | Person(s) interviewed | Maturity (recent/struggling/Mature) | Orientation (P-P-P) (People, Planet, Prosperity) | Scale (micro/small/substantial) |
|--|-------------------------------------|-------------------------------------|--|---------------------------------|
| Food Forests | Kitchen-garden-man / De Moestuinman | recent | People/ Planet | micro |
| Food garden /Voedseltuिन | Manager | Mature | People/ Planet/ Prosperity | substantial |
| Urban agriculture | Project developer | struggling | People | micro |
| Talent for Nature/ Natuurtalent | Director | Mature | People/ Planet/ Prosperity | substantial |
| De Enk, natuur en Milieu educatie | Project developer | Mature | People/ Planet | substantial |
| Rotterdamse Munt | Project developer | struggling | People/ Planet | substantial |
| De Dakakker | Director | Mature Demo-site | Planet/ Prosperity | Small |
| Hofbogen | Co-initiator | recent | People/ Planet | small |

Annex 2 Oslo: Overview Interviews Edible City Solutions

This section provides in detail the stakeholder engagement per case study in Oslo in the series of ECS. Relevant points are the issues of the ECS (activities, goals, number of people working), identification and short description of stakeholders (profile, interests, scope of action of the stakeholder towards ECS) and their role and power position in the particular ECS projects.

| Name of the ECS-initiative or business | Person(s) interviewed | Maturity (recent/struggling / Mature) | Orientation (P-P-P) (People, Planet, Prosperity) | Scale (micro/small/substantial) |
|--|-------------------------------------|---|--|---------------------------------------|
| Linderud Manor | Museum coordinator | Mature as Linderud Manor; recent as CSA | People as Linderud Manor; Planet - People as CSA | Small as Linderud Manor; micro as CSA |
| Tveten CSA | CSA Manager (also farmer) | Recent | Planet - People | Micro |
| Lif Laga | The project manager and a volunteer | Struggling | People - Prosperity | Small |
| Oslo Living Lab | Project manager | Struggling | People - Planet - Prosperity | Small |
| Gruten | Founder | Mature | Planet - Prosperity | Small |
| Herbanists | Founder | Struggling | Planet | Small |
| Tåsen Microgreens | Founder | Mature | Prosperity | Small |
| Bybi | CEO | Struggling/Mature | Planet | Micro |
| Onkel trolls | Founders | Recent | Planet - Prosperity | Micro |
| Dr. Dedichen Drivhus | Volunteer | Struggling | People | Small |

1. Community Supported Agriculture (CSA) initiatives

1.1 Linderud Manor ("Linderud gård" in Norwegian)

Webpage: <https://mia.no/linderud>

Linderud Manor is an old estate on the site of an historical farm dating back to the Middle Ages and has belonged to the Mathiesen family for generations. In 2007, Linderud Manor became part of the



Museums in Akershus (MIA) which consists of 20 museums across the whole region.

Organizational form: Foundation

Location: Bjerke district

Establishment of the CSA: summer 2019

Main goal and activities: The gardens around the main building has one of the country's best-preserved historical gardens. Tours of the garden are offered every Sunday during the summer season and the building is also open for guided tours and concerts. The main building also hosts a museum cafe. Twice a year a flea market is organized where local food producers sell directly to consumers. During this event Linderud Manor sells their own apple cider which is pressed and bottled by a private company from apples grown on site. Last year they harvested and processed one ton of apples. This product along with others from the manor are also sold in other MIA museums. Every year the manor organizes a big Halloween party with historical themes which is very well known and popular in the neighborhood. Since Linderud Manor is a museum, they have a strong focus on educating the public about the history of the area and their traditions.

This year, Linderud Manor started to work on the establishment of a community-supported agriculture project (CSA): a partnership between farmers and consumers (mainly neighbors) in which the responsibilities, risks and rewards of farming are shared. Linderud farm received funding from the Agency for Urban Environment to start this CSA project with the goal of offering a space where neighbors can meet, grow vegetables together and create a sense of community in Linderud.

Employed person (s): three people working for MIA: general manager (25% position, she is running in total 3 museums in the region), gardener (100% position), and another person working 50% position (mainly tasks related to the guided tours). **Volunteers:** recently one volunteer has started to help out with the garden.

1.2 Tveten CSA ("Tveten andelsgård" in Norwegian)

Webpage: <https://www.tvetenandel.no/>

Tveten CSA is located inside Tveten farm ("Tveren gård" in Norwegian) which has one of the best preserved farm gardens in Oslo, and a total of eight buildings. The land is owned by Oslo Municipality since 2007 and all buildings are managed by the Agency for Cultural Affairs.

Establishment of the CSA: May 2019

Organizational form: CSA

Location: in Tveita (Alna district), a residential area in the east side of Oslo.



Main goal and activities: Tveten CSA is a newly-formed community-supported agriculture located at the historic Tveten farm. Here the land was cultivated for centuries, until the mid-20th century. Nowadays, it is the municipality of Oslo that owns the land and allowed the newly CSA to use the land for vegetable production and beekeeping. The purpose of Tveten CSA is to create a green and social meeting place where local people can grow and harvest organic vegetables together, and build and preserve the historical garden of Tveten farm.

Tveten CSA has 75 shares this season: 30 family shares (price: 360 €), 30 single shares (price: 290 €) and 15 shares for kindergartens and schools in the area (around 100 people in total). It is possible to buy a share for one season at a time, and they committed to contributing a certain number of hours per year. Although they have meetings every week, it is mandatory to attend only 3 times a year to these meetings. In return, they get to harvest vegetables corresponding to their share throughout the season. They mainly use Facebook, sms and emails to communicate among them. In the future, they would like to involve more immigrants, since persons with an immigrant background represent the majority of the population in this district. They also would like to strengthen their collaborations with kindergartens, schools and highschools.

Employed person (s): They have a farmer (40% seasonal position) who has the professional responsibility for the cultivation, organizes the CSA and arranges when people (that owns a share) can pick up a package of newly harvested goods. **Volunteers:** The board of the CSA consists of 7 volunteers and the gardener. Usually around 15 people come to the meetings and social gatherings every week.

2. Youth and social entrepreneurship

2.1 Líf Laga

Webpage: <https://www.liflaga.no/>

Organizational form: volunteer organization

Founded: in 2016. Since June 2019, registered as a foundation.

Location: Stovner district, located to the far north east of the city of Oslo.

Main goal and activities: Líf Laga is focused on youth, apple picking, meeting places and creating values that benefit the community. Apples are hand-picked by local youth in collaboration with asylum centers, schools, sports teams and other local enthusiasts. Líf laga creates meeting places where people of different ages, with different cultures and backgrounds can meet to do things together.

Owners of private apple gardens in the neighbourhood contact Líf Laga to give away their apples. The fruit is then picked by youth and other volunteers, after which they are pressed by a fruit pressing company and turned into apple juice. Last year the organization picked around 10 tons of apples in private gardens. Líf Laga apple juice is sold in their web page, in local flea markets, community events in the Stovner district of Oslo and in their new store in Stovner shopping center. All the profit goes back to socially beneficial purposes.

Volunteers: the program coordinator is a social worker working in Oslo Municipality. **Group of core volunteers:** around 20 youth, 5 of them are more-than-average engaged. In the high season, from August to October, there are around 400 volunteers (mainly youth) picking apples.



2.1 Oslo Living Lab

Webpage: <https://oslolivinglab.no/>

Organizational form: Volunteer organization

Founded: 2018. The youth program was initiated by Nabolagshager in 2018 as a summer jobs program. Since 2019 it is registered as a volunteer organization.

Location: Grønland, a neighbourhood in central Oslo, in Gamle Oslo district.

Main goal and activities: Oslo Living Lab is an entrepreneurship program where green jobs and circular economy are explored and co-created by youth from Grønland. Together, youth and

professional mentors, find opportunities to turn waste from a single city block into valuable products like compost.

During the summer season, the young people work at “Tak for Maten” rooftop garden, along with other urban agriculture projects and community events around Oslo. They explore circular opportunities, work with waste products from local businesses (especially food waste), engage in beekeeping and work on developing products like dried herbs and other forms of food preservation. During the winter months, they focused on circular innovation

with 'waste' products found in Grønland. Last winter, they explored entrepreneurship through all stages of the business process from planning, branding, social media, production, marketing, and sales. The final product was a "Growing kit" - consists of mixed soil and compost, seeds and instructions packed in a growing bag.

Employed person (s): youth program coordinator, two mentors of youth and 12 minority youth (working part time) from a low performing high school in Oslo (Hersleb highschool). **No volunteers.**

3. From hobby to business

3.1 Herbanists



Webpage: <https://www.facebook.com/herbanists/>

Founded: in 2016 as a volunteer organization. In 2018, Herbanists was registered as a limited company (Herbanist AS) after which they started producing different products to sell. Currently, the organization is considering restructuring as a co-operative.

Location: Gamle Oslo district, located in the eastern part of central Oslo.

Main goal and activities: A collective of herb enthusiasts interested in cultivating and foraging herbaceous plants in urban environments. The group grows herbs and edible flowers in Oslo's first city garden called Losæter, and they use these medicinal and

culinary herbs to make products like tea, herbal salts, cosmetics, etc and sell them at local markets. They also deliver fresh herbs and flowers by bicycle to local restaurants. Herbanists organizes seasonal courses and workshops about plant uses and preservation, natural cosmetics, medicinal plants, etc. During summer, they also organize activities for volunteers and social gatherings where volunteers help out in the garden, share and exchange gardening knowledge and share meals together.

Employed person (s): no formal employees at the time. **Core team in charge of the foundation and company:** 3 people and a graphic designer. **Volunteers:** from 2 to 6 volunteers per social event or volunteer activity ("dugnad") in Losæter. Usually the same 3-4 people come to all the social activities (core group of volunteers). Some times more than 10 volunteers, but not very often.

3.2 Onkel Trolls Spiskammer

Webpage: <http://onkeltroll.no/>

Founded: 2016

Organizational form: sole proprietorship. Started as a hobby, in 2016 the group started to produce some products and sell them in shops and food markets.



Location: Oslo

Main goal and activities: Onkel Trolls Spiskammer forages mushrooms, wild garlic and other edible plants from the Norwegian forest and transform these delicious and natural ingredients into gourmet products. Onkel Trolls's products are sold in their online shop, but also in eight shops in Oslo and local flea markets. This year they started to organize workshops and courses about how to forage edible ingredients from the forest and use them for cooking. The main purpose of the workshops and courses is to create awareness about producing and consuming local food.

Employed person (s): the owners (2 people) are the primary employees, but others are involved from time to time. **Volunteers:** sometimes they get help from friends.

4. Successful ECS

4.1 Gruten

Webpage: <https://www.gruten.no/>

Founded: 2014

Organizational form: Limited comp

Location: shop (only open on Thursdays) in Torshov and mushroom farm in Vollebekk fabrikk in Bjerke district.

Main goal and activities: Gruten is a locally based business that creates new values of coffee grounds. With coffee grounds as a raw material, they make products like soup and body scrubs. In addition, they aim to increase knowledge and awareness of coffee grounds as a useful resource through courses, workshops and lectures to companies, organizations and schools. Recently they launched Gruten's oyster mushroom cultivation kit - a kit to grow mushrooms at home with your own coffee grounds. These products can be purchased in their online store and in twelve stores in Oslo and some outside Oslo. Last year Gruten also started growing oyster mushrooms in coffee grounds in two large shipping-containers at Vollebekk Fabrikk. This mushroom farm is the first of its kind in Norway where they collect almost one ton of coffee grounds per month. They sell oyster mushrooms to restaurants by bicycle and directly to customers. Gruten also attends festivals, markets and other public events to sell Gruten's products and offer activities for both children and adults.



Employed person (s): two full employees: the owner of the business and the production manager of the mushroom farm. **Volunteers:** Gruten has a board with four members (all volunteers) involved in the development of the business. There are 2-3 volunteers and a person receiving work training (as part of a program offered by the Norwegian Labour and Welfare Administration) involved in the mushroom farm.

4.1 Tåsen Microgreens

Webpage: <https://www.tasenmicrogreens.no/>

Founded: 2016

Organizational form: Limited company

The organizational form changed from a sole proprietorship (established by a couple in 2015) to a limited company at the end of 2016. They started in the basement of their house, but after one year it became too small and they moved their business into the basement of the building Greenhouse Oslo (the old Farmer's Union building).

Location: Grønland, a neighbourhood in central Oslo, in Gamle Oslo district.

Main goal and activities: production of local microgreens (young shoots which are harvested typically 5 to 20 days after germination, when they only measure a few centimetres high) for restaurants, canteens, catering companies and specialty shops in Oslo. With a high level of professional knowledge and new technology, they have built a sustainable business where they take care of the entire value chain themselves. Chefs in high-end restaurants use these microgreens to garnish and add colours and flavours to dishes. Tåsen Microgreens produce and distribute microgreens directly (and mainly) to the customers and also recently through retailers like Dyrket.no. They deliver their products with electric cars. They would like in the future to be able to sell their product to private people and supermarkets (event through), but they need to develop a new package for this. They have approx. 50% of the market in Oslo (the rest of the market is from the Netherlands). Tåsen Microgreens won the Business development award for agriculture in 2017.

Employed person (s): 4 people: a CEO working mainly on research and development, a production planner and two people working with the production of microgreens, packing and distribution.



5. Other ECS initiatives

5.1 ByBi - Oslo's urban beekeepers

Webpage: : <http://bybi.no/>

Founded: 2012

Organizational form: volunteer organization

Bygdøy, which is a peninsula situated on the western side of Oslo.

Main goal and activities: ByBi is Oslo's urban beekeeping association and an environmental organization focusing on urban biodiversity. They are organized as a local chapter with around 400 members as part of the Norwegian Beekeepers Association ([Norges Birøkterlag](#)). They are a network of beekeepers, urban farmers, pollinator enthusiasts and green city developers.

Through educational programs, research projects, courses, workshops and community activities/events, ByBi engages residents, politicians, urban developers, urban farmers, academics, private people, and businesses in understanding of the importance of insects and biodiversity in cities. Currently, they are running apiaries at Gartneriet Bygdø Kongsgård, Kongsgården, Oscarshall, Dronningparken and Maridalen, where they harvest honey in two rounds throughout the season. The summer honey is harvested in late July and the autumn honey is harvested in early September. ByBi honey is sold in their online shop, in shops in Oslo (17 shops in total) and it is also served at breakfast buffets in five hotels.



Bybi is an active driver to increase biological diversity in Oslo. Through their ByBi BISTÅR service (consultancy service), they assist companies, organizations, urban farmers and public agencies in establishing pollinator-friendly landscapes.

Employed person (s): one person employed in 60% position. Main responsibilities: general manager, responsible of the service ByBi Bistår and product developer. **Volunteers:** one volunteer fully involved (she is paid for some specific activities): responsible for ByBi's education program, research projects, beekeepers and apiaries. Around 15 beekeepers working as volunteers. Bybi has also a board of seven people (volunteers).

5.2 Dr. Dedichens Drivhus

Webpage: <https://www.facebook.com/dr.dedichensdrivhus/>

Founded: 2015

Organizational form: volunteer organization



Location: Alna distric

Dr. Dedichen's old private hospital was established around 1900 in Trosterud. The property is owned by the municipality of Oslo: main building that used to be the hospital and three greenhouses that had not been in use for several years. The voluntary association of Dr. Dedichens Drivhus has been using the largest greenhouse (600m²) since 2015. The greenhouse is used by locals, schools and kindergartens to grow vegetables and flowers. The greenhouse is also an open social meeting place for the local community and

engages in the development of the area.

Main goal and activities: the purpose of this initiative is to revitalize Dr. Dedichen's old hospital area at Trosterud in Oslo. They want to create social meeting places with many activities for the community. Main activities: they grow plants during Spring (from March to October) in the greenhouse and they organize market days where they sell all the plants that they grow (all the benefits go to the organization). They also organize courses and workshops to teach how to grow plants and take care of them. Currently, they have 60 members that are engaged in the initiative (membership is 10 € per year). The members get soil, pots, some seeds and access to the greenhouse to grow their own plants. More than 8000 people live within five minutes walking distance of the main greenhouse, and since the area is lacking places for people to meet, the greenhouse has become a very popular place to meet in recent years. They would like to involve more youth and young adults (15-30 years) in the project.

Employed person (s): any former employees. **Volunteers:** they have a board with a board leader. Many experts from the community that help out to run the project.

Annex 3 Andernach: Overview Interviews Edible City Solutions

| Name of the ECS-initiative or business | Person(s) interviewed | Interviewed by | Maturity (recent/struggling/mature) | Orientation (P-P-P) (People, Planet, Prosperity) | Scale (micro/small/substantial) |
|--|-----------------------|--------------------------------|-------------------------------------|--|---------------------------------|
| ECS1 | CEO and Expert | Thomas Wachtel Suhana Reddy | mature | People Planet | substantial |
| ECS2 | CEO | Thomas Wachtel | mature | Prosperity, Planet | substantial |
| ECS3 | Founder | Thomas Wachtel | recent | Planet, People | micro |
| ECS4 | Store Manager | Thomas Wachtel | mature | Prosperity, People | substantial |
| ECS5 | Founder & Member | Thomas Wachtel | struggling | Planet, People | small |
| ECS6 | Founder & CEO | Thomas Wachtel | struggling | Prosperity, Planet | small |

Annex 4 Berlin: Overview Interviews Edible City Solutions

| Name of the ECS-initiative or business | Person(s) interviewed | Interviewed by | Maturity | Orientation (P-P-P) | Scale |
|--|-----------------------|--|------------|--------------------------|-------|
| ECS V | Founder | Suhana Reddy, Thomas Wachtel, Ina Säumel | Struggling | People-Planet-Prosperity | Meso |
| ECS III | Founder | Suhana Reddy, Thomas Wachtel, Ina Säumel | Struggling | People-Planet-Prosperity | Small |
| ECS I | Local Lead | Suhana Reddy, Ina Säumel | Mature | People-Planet-Prosperity | Meso |
| ECS IV | Local Lead | Suhana Reddy, Ina Säumel | Mature | People-Planet-Prosperity | Meso |
| ECS II | Founder | Suhana Reddy, Ina Säumel | Struggling | People-Prosperity | Small |
| ECS VI | Founder | Suhana Reddy, Thomas Wachtel, Ina Säumel | Mature | People-Planet-Prosperity | Small |
| ECS VIII | Founder | Ina Säumel | Starting | People-Prosperity | Small |

Annex 5 Havana: Overview Interviews Edible City Solutions

| Name of the ECS-initiative or business | Person(s) interviewed | Interviewed by | Maturity | Orientation (P-P-P) | Scale |
|--|-----------------------|----------------|------------|---------------------|-------|
| ECS I (Farm I) | Founder | Ina Säumel | Mature | People-Prosperity | Meso |
| ECS II Organoponic Garden I | Founder | Ina Säumel | Mature | People-Prosperity | Small |
| ECS III CCS I | Local Lead | Ina Säumel | Mature | People-Prosperity | Meso |
| ECS IV Mini Industria I | Local Lead | Ina Säumel | Mature | People-Prosperity | Meso |
| ECS V CCS II | Local Lead | Ina Säumel | Mature | People-Prosperity | Meso |
| ECS VI Farm II | Founder | Ina Säumel | Struggling | People-Prosperity | Small |
| ECS VII UEB I | Local Lead | Ina Säumel | Mature | People-Prosperity | Meso |
| ECS VIII Mini-Industria II | Founder | Ina Säumel | Mature | Prosperity | Meso |
| ECS IX Farm III | Local Lead | Ina Säumel | Mature | People-Prosperity | Meso |

Glossary

| Abbrevia tion | Description |
|------------------|---|
| BCT | Governance body of the project, team of Business Consultant |
| EdiCitNe t | Edible City Network |
| 3 BMC | Three dimensions layered Business Model Canvas |
| ECS | Edible City Solutions |
| FC | Follower City |
| FRC | Front-runner city |

About the EdiCitNet project

EdiCitNet is demonstrating innovative nature-based solutions (NBS). Edible City Solutions (ECS) are going one step further: We include the whole chain of urban food production, distribution and utilisation for inclusive urban regeneration and address societal challenges such as mass urbanisation, social inequality and climate change and resource protection in cities.





Thank you!



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