

# The project of the pop-up recycling mall “Rundgång”, Karlstad

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## **Is the project a case of...:**

- State-initiated co-creation
- Entrepreneur-driven co-creation
- Grassroots-based co-creation\*

*\*For an elaboration of the typology, please consult the GOGREEN theoretical framework p. 25.*

## **Integrated case analysis**

Before proceeding to the scoring of the GFs, please provide a 3–5 page case analysis in which you describe the background, history, and national, regional, and local contexts of the case, the problems and goals addressed by the local collaboration, the participating actors and their relationships, the unfolding of the co-creation process, the most important governance factors (this may include factors other than those in focus in this project), and the generated outputs and outcomes. The conclusion may specify a few lessons learned from the case study.

### **1) Background, history, and national, regional, and local contexts of the case**

The national “Viable Cities” initiative commenced in 2017 and is closely linked to the European mobilization around “Mission Climate Neutral and Smart Cities 2030” (<https://en.viablecities.se>). “Viable Cities” is funded by the national research funding agencies Vinnova and the Swedish Research Council Formas and the Swedish Energy Authority. In October, 2021 the second phase “Climate Neutral Cities 2030” started with the goal that all participating cities will achieve climate neutrality by 2030. The same year Karlstad municipality became a new member of “Viable Cities” and the project “Climate Neutral Karlstad 2030” (Klimatneutrala Karlstad 2030) was initiated. “Climate Neutral Karlstad 2030” involves partners from the public sector, civil society, local/regional business and industry and the academy. The initiative has two focus areas: circular consumption and transport. It is built up around four themes: 1) Governance and financing, 2) Mobilization and co-creation, 3) Innovation and service development, and 4) Behaviour and communication.

In this report the focus has been on the initiation and implementation of the pilot project “Rundgång” (and to some extent on the continuation of the project) that is a recycling mall aiming at promoting circular economy approaches within the context of the broader projects “Viable Cities” and “Climate Neutral Karlstad 2030”. The project built on ongoing processes of work for sustainable consumption through reuse already progressing in the region through networks of non-public actors, businesses and organisations. After the end of the pilot project in the end of 2023 private small business owners continued

Data collection has taken place through interviews and document studies. Both the interviews and the documents address both the broader context and the specific pilot project. The respondents were part of the broader project leadership and/ or central actors in the inception and implementation of the recycling mall “Rundgång” and active participants that is not part of the project leadership (small business owners and a volunteer) (a description of “Rundgång” can be found under heading 2). The primary focus, accordingly, has been on how the actors perceived the project and its processes, how this has involved co-creation and the aim of green transitions.

## **2) The aims of the project and the sustainability problems that it seeks to address**

Karlstad municipality has formulated the goal of being fossil-free and climate-smart. The goal is to achieve climate neutrality by 2030. The municipality include both geographical and consumption-based emissions in this ambition. The municipality’s standpoint is that the consequences of climate change and global warming, and the depletion of the environment and resources that follows much of our patterns of consumption, need to be addressed by joint action by the municipality, businesses, organizations and citizens. For Karlstad municipality this challenge extends to the objective to create attractive living environments and be a growing municipality located at a delta between a river and a large lake (the largest lake in the European Union). A stated overarching vision for the municipality is to grow both in terms of population and economy, but to do this in a socially and environmentally sustainable way. The municipality works towards integrating the UN's global development goals, Agenda 2030, into the governance model and into the development of the municipality itself. The ambition is that the municipality should be at the forefront of sustainable development and be open to new solutions in order to achieve long-term sustainability. Included in this are the goals to be a “climate-smart” and fossil-free municipality. The municipality acknowledges that to reach these goals this requires the knowledge, participation and action of a broad set of actors in order.

Hence, the challenges of climate change and connected measures must not only permeate the entire municipal organization but also make it easier for the citizens to make climate-smart choices. The project “Climate Neutral Karlstad 2030” aims at strengthening already initiated work on environmental issues and make the municipality into a role model for other Swedish municipalities in local climate action. In order to disseminate the ideas and models to a wider set of municipalities and other actors. Another important goal is to turn the climate challenge into opportunities for a better life for all businesses, organizations, and citizen in the municipality. The project “Rundgång”, that is the concrete case in this study, involves, in addition to the municipal administrators, the municipal energy company and the property owner that owns the mall “Mitt i city”, more than 40 actors and includes second-hand, remakes, reconditioned technology, repair services, waste-smart products, rental services and also events that are aimed be inspiring, creating knowledge in ways that stimulate re-use and circular economy. “Rundgång” also includes a remake studio where garments and gadgets can be repaired and re-produced. In addition, it arranges workshops and events focusing on recycling and reuse.

## **3) The participants and their interaction and communication in and between meetings**

The focus in “Climate Neutral Karlstad 2030” is on co-creation and the municipal role is as a funder (primarily through its “Viable Cities” funding and through the municipal energy company) and as a facilitator responsible for project management and coordination. In the start-up phase the focus has been

on involving business actors in the circular economy and facilitate sustainable transport solutions. In addition to the collaboration with the included actors from public, businesses and civil society (the latter of course including organized citizens) there are several ambitious actions aiming at involving citizens as service users, individual consumers, members of neighbourhood groups, etc. too. To this aim the municipality has launched a “smart map” and other initiatives to facilitate the development of a sharing economy, it is arranging breakfast meetings, a café and a workshop series (“The Future Consumer”) both as knowledge transfer but also as experience sharing between actors and more events is being planned. Even though the first year has passed the project is still in in large parts in an emerging phase with new ideas and concepts being developed.

Project participants in the broader “Viable Cities” collaboration are: Karlstad municipality (public actor), Region Värmland (public actor), Värmland's Idea Borna (civil society), Nature Conservation Association (civil society), Klimatklubben Karlstad (civil society), Coompanion Värmland (civil society), the Agenda 2030 Protocol (local/regional business and industry), Property Owners Karlstad (local/regional business and industry), Centrum Karlstad (business and industry), Innovation Park (regional academic, business and industry collaboration) and academic partner is Karlstad University. The project is facilitated and coordinated by the environmental office at Karlstad municipality, who is also the project owner, in collaboration with Experio Lab, Region Värmland.

The narrower collaboration in focus in this report takes place within “Climate Neutral Karlstad 2030”. The collaboration around the recycling mall “Rundgång” includes Karlstad municipality (administrators at the environmental office) and initiator, Karlstad Energi (the municipal energy company), “Mitt I City” (a mall owned by a private property company) and Coompanion Värmland (civil society). This part has been financed by “Climate Neutral Karlstad 2030” with additional funding by internal municipal funds for climate mitigation, funding from the municipal energy company and subsidies of rent from the property owner. In addition to the core project participants there is a number of small business owners and a few volunteers taking part in “Rundgång”. During its pilot-phase “Rundgång” was coordinated by administrators from the environmental office at Karlstad municipality, who is also the project owner, and managed by a project manager externally recruited by the municipality. After the pilot-project the “Rundgång” has been managed by three small business owners that where active also during the pilot-project.

#### **4) How often do they meet, and do they communicate between meetings?**

“Climate Neutral Karlstad 2030” has a steering group, managers for its different projects and working groups. One of these working groups was tasked with investigating and initiating a recycling mall (this process led to “Rundgång” described above). The working group concluded that there were conditions for a recycling mall and secured funding for it. After that a project manager was hired. The project manager has mandate to take decisions in order to be able to move forward quickly. The project manager has worked closely with the working group consisting of the three financiers but also additional partners who have influenced how the process has been designed. The working group meets weekly, usually online. Outside the working group, the project organization around “Rundgång” is quite fluid with actors both joining and leaving (usually small businesses that sell recycled goods, promote recycling and circular economy at “Rundgång”). There is, according to the respondents, ongoing communication and also follow-ups of the progress of the mall and new ideas are developed. The less central actors are mainly focused

on their own activities and not involved in, and less knowledgeable about, the running of “Rundgång”. All involved actors of “Rundgång” meet regularly for meetings that focus on joint issues of running the mall.

#### **5) The role and forms of knowledge sharing, coordination and joint problem-solving**

The main role for the pilot-project manager has been to coordinate the actors involved in “Rundgång”, included their inputs in the continuous work and facilitate the collaboration on a day-to-day basis. This includes interacting with all the actors that have hired shop space in the recycling mall. The project manager has also been responsible for arranging workshops and other activities. The project manager also coordinated the development of a circular clothing collection. These practices have continued after the end of the pilot-project under the new leadership. There is, according to the respondents, ongoing communication and also follow-ups of the progress of the mall and new ideas are developed.

#### **6) The relation between consensus and conflict and the handling of the latter**

All actors involved in “Rundgång” is guided by a common purpose in facilitating a transition to a green circular economy and share the perception that this demands collaboration among a broad set of actors to be fruitful. This common purpose has built trust in the working group and among the wider group of involved actors that has facilitated the collaboration around “Rundgång”. In this sense there is a consensus on the overarching aim of the collaboration. There is no indication of systematic efforts, measures or organizing that aims at building trust and/or mediate conflicts. It seems, however, that the perception of a common purpose and basic trust in place among the project participants has enhanced the general willingness to collaborate. There has been some friction between actors regarding financing and also about actors’ different roles and efforts in the project. This has, according to the respondents, not led to any deep issues or problems with an impact of the processes of “Rundgång”.

#### **7) The role and form of leadership: lead actor, steering group and/or collective leadership**

The municipality recruited an external project manager for “Rundgång”, a green activist highly invested in broad collaborative approaches. The project manager has led the project together with a working group in ways that indicate the exercise of facilitative leadership. The working group consisted of representatives of the funders of the project and within this group there are indications that there has been a joint leadership with the project manager as the executive lead actor. There is, according to the respondents, ongoing communication and also follow-ups of the progress of the mall and new ideas are developed. After the pilot-project the “Rundgång” has been managed by three small business owners that were active also during the pilot-project.

#### **8) The temporal unfolding of the co-creation process: major shifts and ups and downs**

In November 2021 the Social Democratic party in Karlstad gave a motion to the municipal council on an investigation into the possibilities for a recycling mall (Larsson & Izat, 2021). According to the motion the mall should sell products that are recycled, reused, ecological or sustainably produced. In addition, there has been an e-petition from a citizen and a suggestion from the student council for the climate (elementary level) on clothes recycling. In April 2022 the municipal board decided that an investigation should be initiated and in June 2022 the municipal council decided to grant the motion and the work with an investigation into the possibilities of a recycling mall begins (KS/2021:553; KF220602). In October 2023 the mall opened to the public with 40 external actors offering products in the mall “Rundgång”. As it was a

pilot project “Rundgång” closed at the end of 2023. The actors will continue “Rundgång” managed by three small business owners that were active also during the pilot-project and this second phase, without the involvement of the municipality that started in February 2024 can be perceived as a (at least partial) successful outcome of the collaborative project initiated by the municipality. There is a worry, among some of the respondents, that the lack of public support (additional funding) can lead to vulnerabilities that can jeopardise the long-term success, and even survival, of “Rundgång”.

**9) The most important governance factors (may include factors other than those in focus in this project)**

A central governance factor is the strive to reduce CO<sub>2</sub> emission, promote circular economy practices and reduce waste. Sustainability and sustainable development factors are also relevant in the project but are more contextual (in the background) than drivers. It is also clear that the involved municipal administrators display a relative openness of public governance paradigms and are willing to use more experimental approaches to reach objectives. The project has been facilitated through blended financing involving national actors, the municipality, the municipal energy company and subsidies from a private property owner. There have been intentional efforts to include relevant and affected actors in the process. There has been an overarching common purpose that also has included an understanding of the need to collaborate broadly. The project has been managed by a project manager and a working group in ways that indicate the exercise of facilitative leadership.

**10) The generated outputs and outcomes**

In October 2023 a recycling pop-up mall is started in the central city of Karlstad: “Rundgång”. The aim is to reduce both waste and greenhouse gas emissions while contributing to a sustainable business and living centre. During the period October-December 2023 the outcomes in terms of climate impacts were monitored but the main outcome is understood to be that of showing actors that this type of recycling mall is possible and that it can be successful both in terms of work opportunities and sales but also as an expression of a green circular economy and its ecological impact in terms of reduced waste and reduced emissions. After the end of the pilot project, that entailed the withdrawal of the municipal actors, phase 2 of “Rundgång” commenced in February 2024 now driven by three small business owners with the support (subsidised rent) of the private property owner. The mall has now moved from its original location in “Mitt I City” to new and larger premises, something that seems to indicate that the mall is quite successful in attracting small business owners and customers.

**11) Lessons learned about the conditions for co-creating green solutions**

In the studied project two factors stand out: a common purpose and an engagement for green transitions among the key actors. Support from a public actor and financing also is instrumental in reaching co-created green solutions. When public actors are involved in co-creation, they need to display a relative openness of interactive governance that also enables experimental approaches. This, in turn, needs to be implemented in concert with intentional efforts to include relevant and affected actors.

## Scoring and analysis of governance factors

### 1. Perceived importance of biosphere conditions

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

Climate change mitigation and waste reduction are stated as the main motives behind “Climate Neutral Karlstad 2023” and the recycling galleria “Rundgång”. This is clear from the interviews, the documents and relevant project websites. The municipality states that these projects are directly related to the municipality’s own climate targets and their work with reducing the environmental impacts. So does the energy company. The private property company also sees clear connections to their objectives to reduce their CO<sub>2</sub> emissions and their waste. The same is true for the small business owners and the volunteer. Hence, biosphere conditions are confirmed as drivers by the respondents.

### 2. Legislation, programs, and formal goals

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

There is limited references to legislation and formal goals. Legislation and formal goals are more considered as background factors that sometimes give the frames within which the collaboration takes place. One example that is highlighted is the Municipal Act that limits how the municipality can interact with profit-driven private companies. When it comes to waste management there is a slight connection to the legislation in how the municipality is allowed to handle waste (connected to recycling) but this connection seems to be very unclear and less important. The energy company is affected by legislation in the way that they are allowed to use their finances and, hence, their economic support to “Rundgång” is sourced from the marketing budget and not from their waste fees. The indirect connection to national programs are clear, however, through the financing from national funding agencies and the Swedish Energy Authority of the Viable Cities program. When it comes to legislation and formal goals, they play a part for the project, but are not vital for the project. Looking at programs, the Viable Cities program is of greater importance but the activity “Rundgång” would have most likely been implemented anyway, but with other financial support due to the expectations from the political majority in the municipality, according to respondents.

### **3. Relative openness of public governance paradigms**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

It is clear, at least rhetorically, that there is an openness from public actors to include actors from businesses and civil society and to inspire individual citizens to change their consumption patterns. The project has involved a large number of actors from the municipal administrators and the municipal energy company, larger businesses (the property owner of the mall "Mitt i City"), small businesses (actors renting space in the galleria) and a few volunteers. The municipal respondents talk about a "collaboration culture" in the municipal organization, at least when it comes to collaboration with private businesses and industry. Respondents also mention the SDGs as drivers of collaboration in processes that aims to meet broader objectives such as reducing the climate footprint and reducing waste. The municipality cannot reach these objectives on their own but need the collaboration of other actors and the citizens, it is stated in municipal policy documents. The private property company also highlights their experience in working together with public actors and especially the municipality in both formal arrangements (following legislation for transports and waste management, etc.) but also through more informal collaborations. All respondents state that the thresholds for future collaboration have been lowered due to the collaboration around "Rundgång" that has been instrumental in establishing a network around green transitions in the municipality.

### **4. Formalized institutional channels for citizen participation and community mobilization**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

The municipal respondents talk about a "collaboration culture" in the municipal organization. There is also formalized institutional channels for citizen participation but mainly connected to spatial planning and other formalized processes. Respondents state that such formalized channels have been less important for "Rundgång". It can be concluded, however, that the municipal administrators have actively created and facilitated inputs from public actors in the collaborative problem-solving process through the management group and broader interactions (meetings, workshops, seminars, etc.) with actors involved in "Rundgång". One clear example of this is the recruitment of an external project manager for "Rundgång" with a green activist profile highly invested in broad collaborative approaches.

### **5. Mechanism for ensuring top-down government and bottom-up social accountability**

QCA score:

- 0
- 0.33
- 0.66
- 1

Scoring confidence:

- Low confidence
- Medium confidence
- High confidence

Data sources:

- Interviews
- Documents
- Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

The initiative came from the municipal council and there are expectation on the project. Connected to these expectations are formal channels of follow-up in place in order to secure top-down government control of the project. Mainly this has taken place through economic reporting (how has money been used) and follow-up of a few key-indicators (number of actors using "Rundgång" for selling reused product and creating knowledge on reuse, visitors to the mall, etc.). Responsible for these follow-ups are the municipal administrators. At the same time the financing of the project is public as it comes from the state or the municipality. Again, this includes routines and formal checkpoints to ensure that the funds are used to according to the financial rules of the funders and to facilitate climate friendly measures. When it comes to bottom-up social accountability the picture is more blurred. Two inputs initiating the project were an e-petition from a citizen and a suggestion from the student council for the climate (elementary level) on clothes recycling. This has been noted by municipal actors as a signal that feedback not only to the municipal organization is needed. The project and the municipality uses different channels to report on the project. There is the tight collaboration in the recycling mall "Rundgång" where involved actors has the opportunity to both follow what is happening and influence decisions. This tight collaboration is facilitated, according to the respondents, through ongoing communication and discussion of the progress and challenges of the mall and new ideas are developed. The communication took place in the management group and through broader interactions, meetings, workshops, seminars, etc., with actors involved in "Rundgång". The communication was primarily facilitated by the project manager. The project also uses the Internet extensively to promote "Rundgång" and report on its progress. In addition, "Rundgång" has gained an interest in the local media (both positive and negative) and can that also be understood as facilitating bottom-up social accountability.

### **6. Strategic agenda-setting by means of translation**

QCA score:

- 0
- 0.33
- 0.66
- 1

Scoring confidence:

- Low confidence
- Medium confidence
- High confidence

Data sources:

- Interviews
- Documents
- Observations



Please elaborate on the reasoning behind your scoring for this governance factor:

Indirectly, the objectives of mitigating the climate impact and reduce waste is relevant within the framework of the SDGs. In addition, the SDGs are mentioned as an “inspiration” for the collaborative design of the project but no SDGs are directly used as an argument for the project or its activities. Instead, the SDGs are mentioned as a background factor but not as factors with a direct influence on the project. They are loosely referred to and acknowledged without any deeper consequences for the project.

### **7. Construction of narratives about successful multi-actor collaboration**

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

Some of the municipal actors are experienced and even trained in collaboration while others look at such processes with more scepticism. Some of the actors have experiences of collaborative processes but mainly between private businesses and the municipality. The main narrative on broad collaboration is that it is a complicated and difficult endeavour. A more principle and basic collaborative narrative, however, that partly frames the project is that “no actor can reach these objectives alone”. This quite abstract and un-precise narrative is referenced in both interviews and documents. The private property company also highlights their experience in working together with public actors and especially the municipality in both formal arrangements (following legislation for transports and waste management, etc.) but also through more informal collaborations.

### **8. Building or harnessing institutional platforms and arenas**

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

The whole project itself can be perceived as experimental collaborative governance that has the potential to build a new physical institutional platform. The main focus is on the physical collaboration around “Rundgång” but the project uses the Internet extensively but mostly for the dissemination of information about the project and its activities add, to a much lesser degree, for interaction and actual collaboration. Accordingly, practices are developed primarily in the physical venue (the mall “Rundgång”) to facilitate the collaborative processes. In some way a new institutional platform may have been built as all respondents state that future collaboration will be easier to achieve due to the collaboration around “Rundgång” that

has been instrumental in establishing a network around green transitions in the municipality. The actual physical space that has been created has also been highlighted by some actors as a facilitator for them to take the next step in their efforts to work on circular economy.

### **9. Provision of access to blended financing**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

The pilot-project “Rundgång” was financed through “Climate Neutral Karlstad 2030” that is funded by Viable Cities (through the national research funding agencies Vinnova and the Swedish Research Council Formas and the Swedish Energy Authority). In addition, “Rundgång” was funded by internal municipal funds for climate mitigation, marketing funding from the energy company (not funds from the regular funding for running the energy company) and subsidized rent by the private property company owning “Mitt i City”. Even though the funding does not directly stipulate that the processes should be collaborative and/or co-creative the funding had had a clear supportive influence on the collaborative problem-solving processes around “Rundgång” by facilitating support from municipal administrators, project management and coordination and multi-actor input (workshops, seminars, etc.).

### **10. The capacity to leverage support from authorities to enable local collaboration**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

Formally, “Rundgång” is initiated by representatives for the social democratic party that is part of the political majority coalition in the municipality. The decision to go ahead with the project has been taken in the municipal board (the municipal political executive) and the municipal council (the main municipal forum for formal political decisions). The municipal council has assigned the municipal administration to run the project and the municipal administration has mobilized its funding. The project continuously reports back to the central municipal administration and will give a final report to the municipal council at the end of the project. However, the political majority in the municipal council has not formulated any clear demands on nature of the project (collaborative or not). The political support has been on the development of “Rundgång” rather than on how this will come about. Instead, the collaborative processes has evolved through decisions of the municipal administrators running the wider project of “Climate

Neutral Karlstad 2030” and influenced by the project management of “Rundgång”. Hence, the requirements of different funding and financing sources have been more related to outcome (reduced climate impact and reduced waste) than to the form (collaboration and co-creation) of the actual process.

### **11. Inclusion and empowerment of relevant and affected actors**

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

There have been some efforts to include all relevant actors in the project. There have been efforts to ensure the breadth of actors and representativeness of different types of actors, including geographical distribution (i.e., city and country) and gender. There have been discussions on which actors that have been present in the mall and which target groups the mall aims at reaching. To ensure a broader participation the rent that actors pay has been kept low and the contracts flexible by the private property company. The aim has been to keep threshold for participating low. Many of the small business included in “Rundgång”, however, has been involved through self-selection after getting to know about the project in social media (Instagram). In addition, there is awareness within the project management that marginalized actors can be difficult to reach and include. So, it can be stated that the efforts to include relevant actors has been quite successful. The efforts to include affected but more marginalized actors or certain marginalized target, however, has not been highly prioritized despite the efforts described above partly due to the quite compressed nature of the project (the limited project time available).

### **12. Clarification of interdependence vis-à-vis common problem and joint vision**

QCA score:

0

0.33

0.66

1

Scoring confidence:

Low confidence

Medium confidence

High confidence

Data sources:

Interviews

Documents

Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

Among the municipal actors there is a strong focus on the objective to reduce climate impact and reduce waste as the project is included in “Climate Neutral Karlstad 2030”. Among other actors the problem definition is more dispersed ranging from supporting the second-hand market more generally as a concept of sustainable trading and consuming practices, developing trade and a vibrant city centre and reducing waste as a way to save money. All interviewed actors, however, share a common interest in facilitating transitions in more climate and environmentally friendly directions. Taken together, there is a strong sense of a common target. It is much more unclear, however 1), if the collaborative process is an efficient way

to reach the formulated objectives (reduce climate impact and reduce waste), and, as a consequence, 2), who the affected and relevant actors are that needs to be included in the collaborative process in order for it to meet its goals.

### **13. Trust-building and conflict mediation**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

There is an acknowledgement that trust between actors is central for a sustainable collaboration. The respondents state that there is a general/basic trust among the participants and that this was helpful in solving some of the friction among the project owners when the financing was mobilized and put together. There is no indication of systematic efforts, measures or organizing that aims at building trust and/or mediate conflicts. It seems, however, that the basic trust in place among the project participants has enhanced the general willingness to collaborate. This has been facilitated by a broad perception of a common purpose that also has enabled trust and conflict mediation in the collaborative process around "Rundgång" and there is clear acknowledgements of the potential contributions of each participant from the respondents.

### **14. Use of experimental tools for innovation**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

In itself the use of a recycling galleria can be perceived as not so innovative but for the municipality the use of the recycling galleria "Rundgång" as a tool to reduce CO<sub>2</sub> emissions, waste and support a circular economy is clearly experimental. "Rundgång" was launched as a pilot project with the aim to investigate if and how the municipality could facilitate action that can lead be part of a green economic transition. In this way "Rundgång" can be understood as a process and a project with a deliberate experimental design. Also, from the perspective of the private property company the circular economy approach as a way to create both green transitions and to increase the attractiveness of the commercial mall "Mitt i City" must be considered innovative.

**15. Ongoing critical self-reflection and learning (i.e., process and/or developmental evaluation):**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

The actual pilot-project “Rundgång” finished at the end of 2023 and has not yet been fully and formally evaluated. There have been follow-ups of key indicators such as the number of visitors, sales figures, number of actors in the recycling mall and even reduction of CO<sub>2</sub> emissions. It has, in addition, been subject to ongoing informal self-reflection in the project team during its inception and implementation according to the respondents. These informal self-reflections have been used as input into the project and have led to changes and adjustments as the project has evolved. The project will, however, be formally evaluated and the results will be reported back to the financiers, the municipality, and the participants. In addition, “Rundgång” is continued and growing after the end of the pilot-project without the support of external funding or facilitation from the municipality.

**16. Exercise of facilitative leadership:**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this governance factor:

All respondents state the importance of the project manager for the pilot-project (externally recruited by the municipality) both as a formal project facilitator (budgeting and leadership of the project), as an inspirational leader through a deep engagement in green transitions, knowledge and networks. Accordingly, the project manager has led the project team forward and has facilitated the collaborative process in a way that has stimulated the joint action of the collaborators.

**Outcome variable: Successfully co-created green transitions**

The outcome variable ‘co-created green transitions’ will be scored in two parts. First, ‘co-creation’ will be scored based on an assessment of whether the participants in the initiative, project or process engaged in collaborative problem-solving that fostered creative ideas and innovative solutions (data will consist of survey data combined with interviews and documents). Next, ‘green transitions’ will be scored based on an assessment of whether the initiative, project or process has fulfilled or is expected to fulfil its green goals, ambitions and aspirations (data will consist of survey data combined with interviews and internal and/or external evaluation reports, including scientific publications).

The scoring of this variable is done in two parts:

1. Is the developed solution based on collaborative problem-solving spurring creativity and innovative solutions?
2. Does the developed solution engender a green transition?

This scoring should be conducted based on both the survey and complementary green outcome evaluations. Please consult Sections 4.4 and 6.10 in the Research Protocol for more details.

### **1. Is the developed solution co-created?**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Survey  
 Interviews  
 Documents  
 Observations

Please elaborate on the reasoning behind your scoring for this part of the governance factor, including the data sources used for the scoring.

Yes, the initiative has come from the municipality but the development of the recycling mall and its implementation has clearly been co-created. The municipal administrators have actively created and facilitated inputs from involved actors in the collaborative problem-solving process through the management group and broader interactions that has taken place through meetings, workshops, seminars, etc. The recruitment of an external project manager for “Rundgång” has been important as the project manager has a history of green activism through broad collaborative approaches. It is therefore clear that the “solution” (“Rundgång”) has been developed through an interactive process involving the actors and their input and not been arranged top-down.

### **2. Does the developed solution engender a green transition<sup>1</sup>?**

QCA score:

- 0  
 0.33  
 0.66  
 1

Scoring confidence:

- Low confidence  
 Medium confidence  
 High confidence

Data sources:

- Survey  
 Interviews  
 Documents  
 Observations

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<sup>1</sup> By “green transitions”, we mean objectives and aspirations that correspond to at least one of the Green SDGs (SDG 6, 7, 11, 12, 13, 14, 15). The project does not have to refer explicitly to the green SDGs, but the project’s green objectives

Please elaborate on the reasoning behind your scoring for this part of the governance factor, including the data sources used for the scoring:

At this stage (July 2024) this is very difficult to evaluate as the impact of the effort is impossible to measure in terms of mitigate CO<sub>2</sub> emission (although the municipality has some data on this) and difficult to measure in terms of reduced waste. On a symbolic level, though, the impact seems to have been considerable due to interest from media (news coverage, etc.) and other societal actors. The dissemination of experiences and knowledge between the involved actors and other actors (both “linear” and circular business) holds the potential of scaling-up effects that can have a broader impact than the actual project in itself. “Rundgång” will continue after the end of the project and that this in a longer run can be a component (not a transition in itself) in a green transition.

**Please list all the informants you have interviewed for the case study (list project role + interview date):**

Project manager, “Climate Neutral Karlstad 2030”, Karlstad municipality, 2023-12-06

Project manager, “Rundgång”, Karlstad municipality, email communication 2023-12/2024-01

Controller, Karlstad municipality, 2024-01-03

Director, private property company, 2024-01-17

Market director, municipal energy company, 2024-01-18

Small business owner (1), 2024-02-07

Small business owner (2), 2024-06-24

Small business owner (3), 2024-06-27

Small business owner (4), 2024-07-01

Volunteer, 2024-06-27

**Please list all the observations you have made (type of meeting/workshop/etc. + observation date):**

No observations has been conducted. One visit to the restarted recycling galleria “Rundgång” conducted on the 7<sup>th</sup> of February 2024.

**Please list all the documents you have analysed (document name + source + year):**

Viable Cities, Klimatneutrala Karlstad (Climate Neutral Karlstad), programbeskrivning, Karlstad municipality, 2021 (Swedish)

Ansökan till Energimyndigheten (Program application to the Swedish Energy Authority), Karlstad municipality, 2021 (Swedish)

Lokalt klimatkontrakt (Local climate contract), Karlstad municipality, 2021 (Swedish)

Larsson, L & Izat, D (2021) Motion – Dags för en återbruksgalleria i Karlstad (Political motion: Time for a recycling galleria in Karlstad) (Swedish) the Social Democrats, Karlstad

Protokoll – Kommunstyrelsen, 2022-04-11, KS/2021:553 (protocol, the municipal board. Swedish) Karlstad municipality

Protokoll – Kommunfullmäktige 2022-06-02, KF220602 (protocol, the municipal council. Swedish) Karlstad municipality

**Please note the response rate for the survey/measurement of outcome variable:**

No survey has been conducted. A survey was sent out but no responses (three reminders).