



CIRCULAR GREEN BLOCKS



Euroopan unioni
Euroopan aluekehitysrahasto

Evaluation report

Introduction

The aim of the two-year Circular Green Blocks partnership project has been to help companies identify and develop business opportunities at the block level that promote a circular and sharing economy, and to help housing associations become aware of the opportunities to implement circular economy solutions in their own properties and neighbourhoods.

The project measures have been implemented in seven different pilot sites around the Helsinki metropolitan area, in Helsinki, Espoo and Vantaa, two of which are private housing companies and two of which are subsidised housing rental companies. In total, around 500 housing units have been affected by the project.

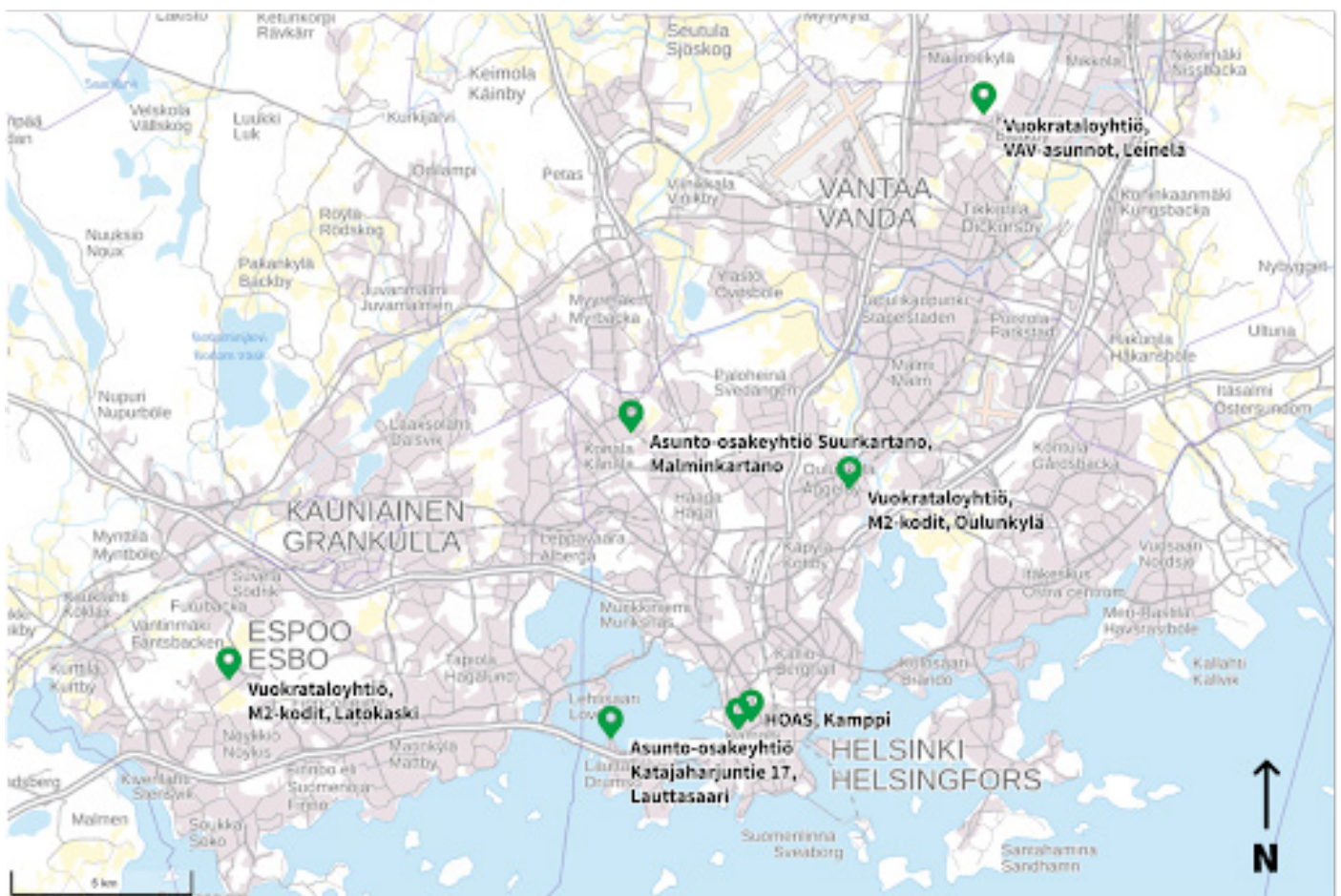
During the project, ten different experiments and pilots have been carried out on shared mobility equipment, shared use of goods, community-based urban farming, sustainable neighbourhood applications, local logistics for housing associations and pop-up circular economy business.

The purpose of this document is to present an evaluation, carried out as a project activity, of what is new and innovative in terms of new circular economy approaches, products and businesses that have emerged during the experiments and pilots.

Pilot blocks

The service providers were invited to offer the pilots and experiments to be carried out by the project in pilot sites in different parts of the Helsinki metropolitan area, in Helsinki, Espoo and Vantaa. The pilot sites represented existing property stock, two of which were owned by housing associations and two by subsidised housing rental companies. The pilot sites are briefly described below.

Map of the project's pilot sites.



Rental housing company, VAV apartments, Leinelä

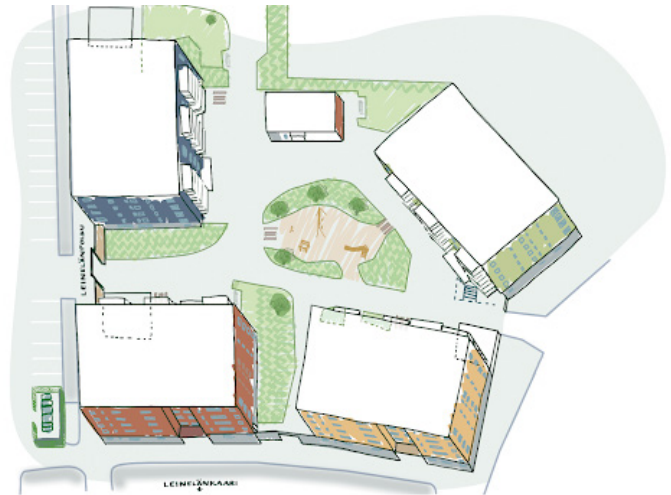
Apartments: 99

Residents: 134

Year of completion: 2017

The tenanted building consists of four apartment blocks with a large unheated outbuilding in the courtyard.

There is an active residents' committee.



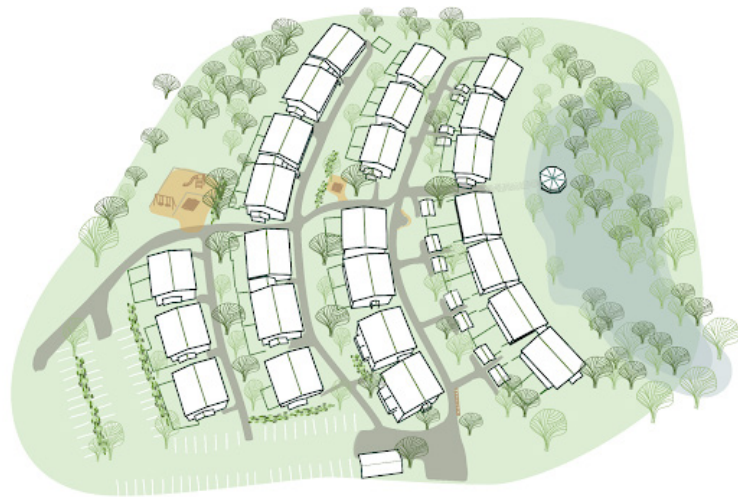
Rental housing company, M2-homes, Lato-kaski

Flats: 54

Residents:

Year of completion: 1991

1991 - 1991 The property consists of several terraced houses of the semi-detached type, each with its own fenced yard. The residents have access to a common clubhouse, a barbecue shelter in the courtyard and a children's playground. There is an active residents' committee.



Housing company Suurkartano, Malminkartano

Apartments: 36

Residents:

Year of completion: 1984

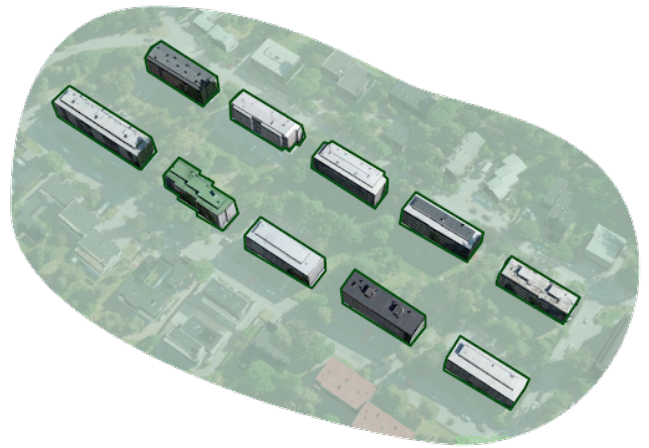
Housing association consisting of two residential buildings with a common courtyard with an adjacent housing association. (There are several commercial premises in the basement on the eastern side of the buildings.)



Housing company Katajharjuntie 17, Lautasaari

Ten different housing companies
Number of apartments: 20-40 in each property
Year of completion: 1960-1970

The Katajharju block consists of ten apartment buildings, whose housing associations have promoted cooperation between each other within the framework of the Housing Association Club project. The housing associations are united by a large common courtyard.



Rental housing company, M2-homes, Oulunkylä

Apartments: 28
Residents: 124

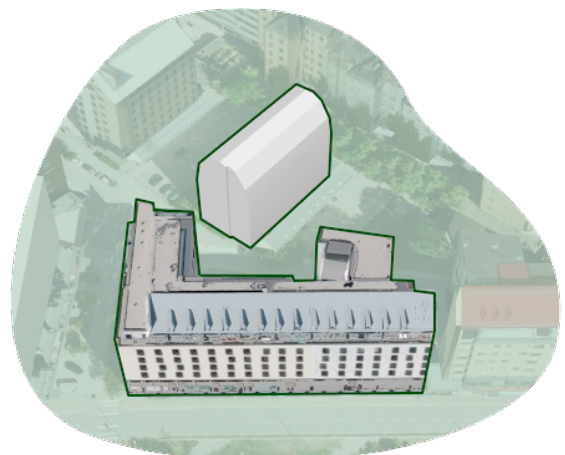
The rent includes a laundry room and a drying room, as well as a living room on the top floor of the building.



HOAS, Kamppi

Two different blocks of flats
Apartments: 287
Year of completion: 1947 and 2000

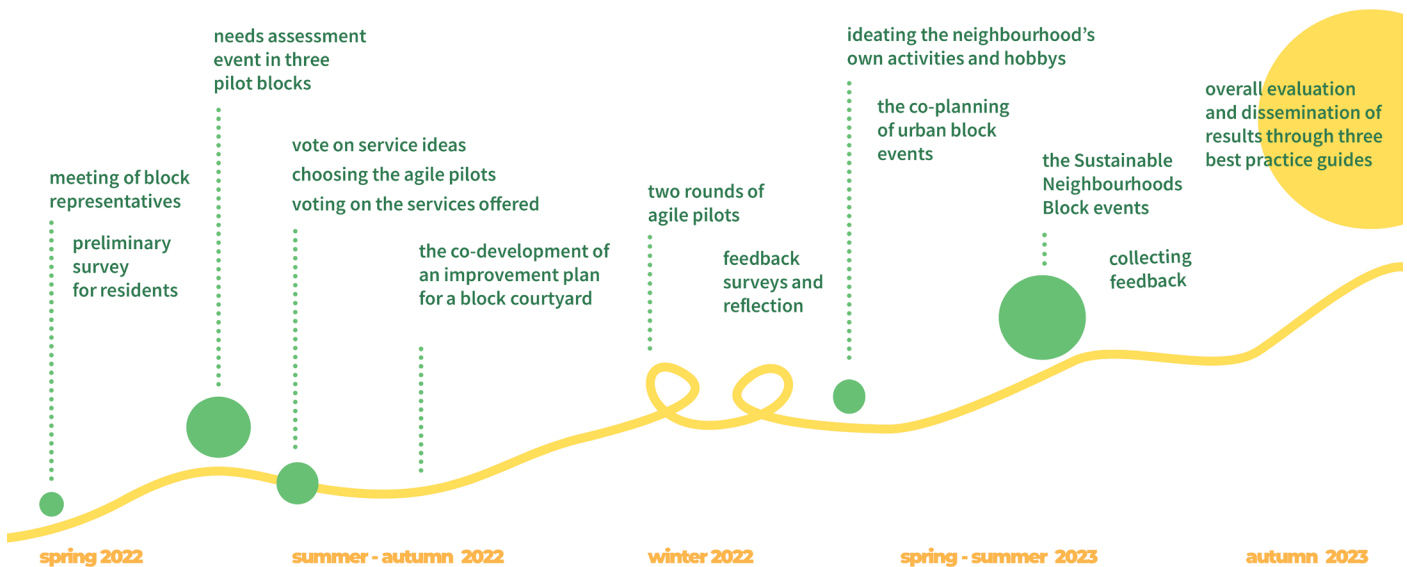
Popular student apartments within a few minutes' walk of the city centre. In one of the buildings there is a common club room.



Involvement of residents

In order to develop successful shared services, it is worth involving the residents of the building from the very beginning. Co-development with residents used a two-pronged approach - starting with an understanding of development needs and only then moving on to developing and testing the actual solutions.

Participation path during Circular Green Blocks



The block launch

The block launch events held in spring 2022 explored the needs of residents and possible spaces for shared services. Residents were invited to participate in the events through an information letter distributed to their apartments, including a link to an online survey.

The purpose of the event is to describe to participants the possibilities of a circular and shared economy, to discuss the project and its progress, to learn from residents about the block and to bring residents together to share ideas. The event combined a physical event at the housing association with digital engagement and prioritisation.

The materials from the block launch could be reused in all the needs assessment sections of the project, except for the map.

Activities of the block launch

BRAINSTORMING ON THE MAP

An illustrated map or aerial view of the block serves as a good basis for starting a discussion. This can be used to gather concrete ideas and wishes from residents. The map can be used to identify problems and solutions. It also makes it easy to think about possible facilities for services.

CHILDREN HAVE FUN - ADULTS HAVE FUN

Children can be actively involved, for example in the garden by drawing or playing games.

At the event, we combined a "wobbly tower" with a quiz on the circular economy, where you could answer a question by removing a block. While the children were enjoying themselves, their parents were able to focus on the other activities of the event.

INFORMATION ON THE CIRCULAR ECONOMY

The event is also an excellent opportunity to share information and answer questions about the circular and sharing economy and its benefits. The more familiar it is, the easier it is to integrate it into the daily life of the neighbourhood.

THEMES IN ORDER

We also used the digital Innoduel platform to organise and prioritise topics of interest to residents. The voting results provided us with easily usable information for the following steps

Planning Sustainable Neighbourhoods events

The design of the sustainable neighbourhoods events drew on information gathered in various ways earlier in the project, as well as on new ideas identified during development evenings for residents. We sought to broaden the range of residents who could participate in decisions by offering the opportunity to vote on ideas. Events were planned in consultation with residents to ensure that the content of the events reflected their interests.

At the events, the project had the opportunity to gather feedback from visitors and discuss with them how to bring circular and sharing economy services into the daily life of the neighbourhood.

How the evaluation is carried out

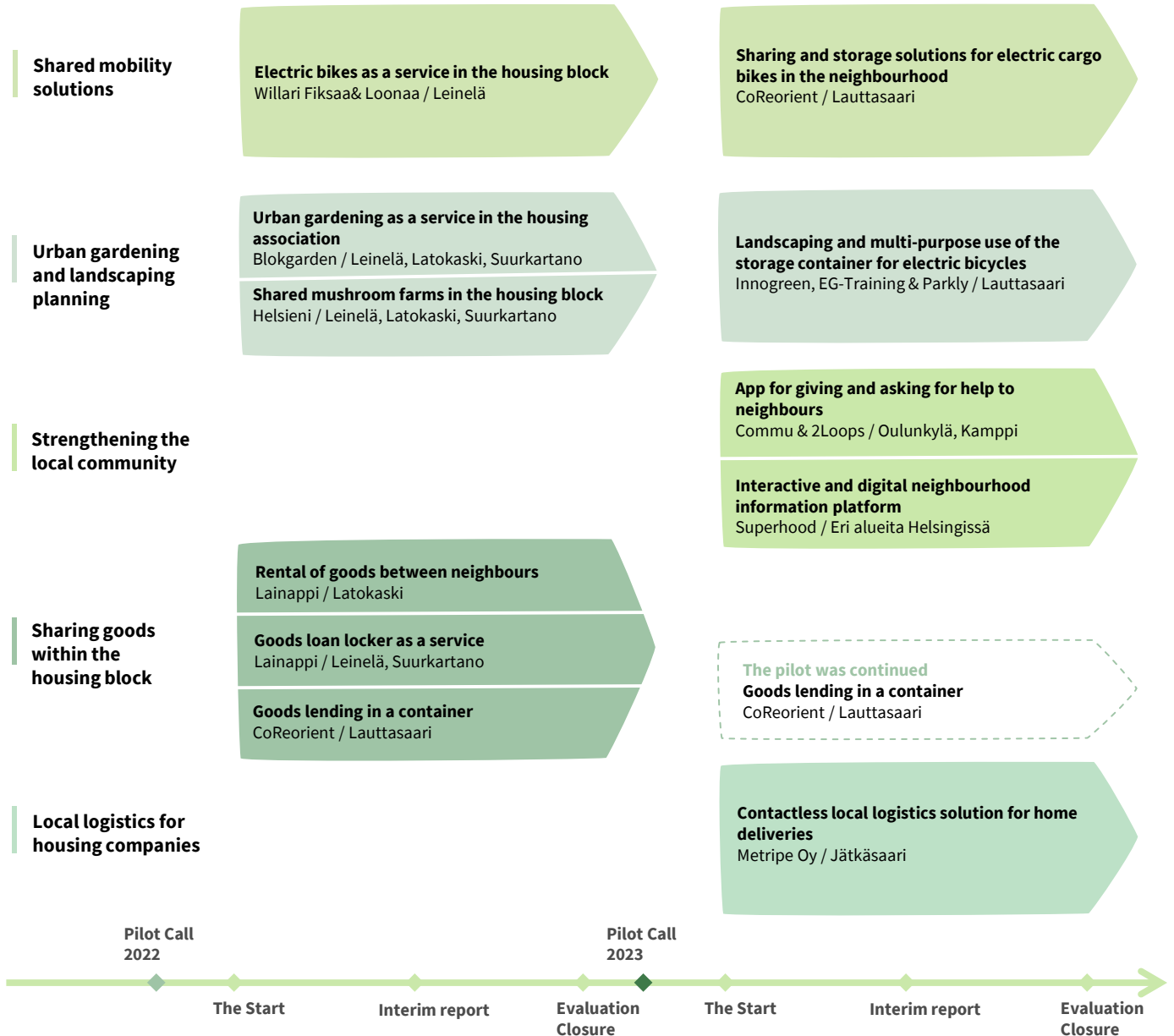
The evaluation will examine the effectiveness of the project measures in developing circular economy businesses in neighbourhoods. The evaluation has sought to find answers to the questions already asked in the project design in order to verify the effectiveness:

- How have the experiments and pilots contributed to the development of circular economy business?
- How have the experiments and pilots contributed to the recovery of SMEs providing circular economy services?
- How have the experiments and pilots contributed to sustainable development in the pilot districts?
- What is the purpose of the experiments and pilots in the "big picture"?
- What are the benefits, risks and constraints to implementing the solution?
- How are the solutions transferable or adaptable to other contexts?
- Assessing the attractiveness of scaling up, e.g. from the perspective of investors
- Identification of interested parties for the results of trials and pilots and identification and exploitation of the right interfaces and communication channels.
- A five-step evaluation model was developed during the project, using materials collected and developed during the project, interviews conducted during the project, and information and ideas gathered at events organised throughout the project.

The Agile Pilot

1. The First Agile Pilot round

2. The Second Agile Pilot round



The cards on following pages contain short descriptions and main evaluation insights from each piloted sharing economy solution.

Urban gardening as a service in a housing company

Blokgarden

PILOT INFO CARD
CIRCULAR GREEN BLOCKS

A Business model

Blokgarden provides its customers with the tools and support for community gardening. The long-term goal is to find solutions to potential food crises caused by climate change through community gardens.



The pilot

A cultivation trial as a service, where the entrepreneur delivered growing boxes, soil and seedlings to the sites. In addition to the equipment, the company offered the residents help in coordinating the community gardening, as well as support and advice on growing the crops themselves during the growing season. At the end of the trial, the company collected the growing boxes and mulch from the sites.

Trial period:
May-September 2022

Number of block pilots: 3

Participating companies: 1

Results

Through the pilot, the company was able to create a new approach to support community gardening and, on this basis, to commercialise the organisation of community gardening activities, especially for rental housing companies.

Sustainable Development Goals



2.3



11.3, 11.7



12.2, 12.5, 12.8



Future

The service packages of different sizes created from the pilot are easily transferable and adaptable to other environments, such as offices, care homes, nurseries and schools. Co-growing provides an opportunity for increased social interaction between residents and reinforces a sense of ownership of their living environment.

Shared mushroom gardens in a housing company

Helsieni

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A Business model

Helsieni grows mushrooms in a circular way, using locally sourced raw materials such as coffee grounds.

The company aims to support people in growing food that is produced nearby.



The pilot

An urban gardening experiment in which a company placed a mushroom patch in the yard of two pilot sites. The mushroom bed produced oyster sprouts for residents to use during the growing season.

Trial period:
May-September 2022

Number of block pilots: 2

Participating companies: 1

Results

The experiment has enabled the company to increase its production and raise people's awareness of mushroom cultivation.

Future

The mushroom growing concept is easily transferable and adaptable.

Sustainable Development Goals



2.3



11.3, 11.7



12.2, 12.5, 12.8



Landscaping and multi-purpose storage of electric bikes

Innogreen, EG Trading Oy ja Parkly Oy

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A Business model

Innogreen implements sustainable green solutions, such as green walls, for indoor and outdoor spaces. EG Trading provides green building services and products, including green roofs, and Parkly offers services such as scalable furniture solutions for urban spaces.



The pilot

The companies carried out a joint experiment in which a storage container for electric load bikes in the courtyard of the pilot site was landscaped with green walls, a liverwort roof was installed on its roof and flowers, edible herbs and seating furniture were brought in to make it more welcoming.

Trial period:
May-August 2023

Number of block pilots: 1

Participating companies: 3

Results

The pilot has given companies the opportunity to test their existing business model in a new environment and thereby develop their product.

Sustainable Development Goals

Future

In addition to increasing attractiveness, plant walls and added urban greenery can support biodiversity in the local area, for example by adding biodiversity-friendly pollinator plants to plant walls. As extreme events caused by climate change increase, additional urban greening and plant walls can have a positive impact on health impacts caused by these events, such as air quality and, locally, outdoor temperatures during hot spells.



11.3, 11.6, 11.7



12.2, 12.5, 12.8



Electric bikes as a service in a housing company

Willari Fiksoo & Loonaa

A Business model

Willari Fiksoo & Loonaa offers maintenance services for bicycles and other sports equipment, and rents electric bicycles in the Tampere area. The company has also participated in electric bike sharing trials.

The pilot

During the trial, residents were able to borrow electric bicycles and a pull cart for children, and receive guidance on how to use them. The bikes and trolley were located in the building of the housing association during the trial period and the company developed a reservation system for them. The company also sought to identify the use and purpose of the shared electric bikes and pull carts in the housing estate.

Results

The company was able to improve its existing product by gaining new knowledge about the housing company as an environment. The use of electric bicycles and a trolley in the housing company environment during the trial period showed that the electric assisted bicycle is suitable as an alternative form of mobility for short or long journeys, both as part of everyday activities and for leisure.

Future

Electric bicycles are an expensive investment for individual consumers, which can be a barrier to switching to more sustainable modes of transport. Sharing services can lower the threshold for choosing a more sustainable way of getting around and doing everyday things, e.g. instead of driving.

A digital application, such as an electronic booking system combined with a payment system, allows not only independent rental activities but also a lighter cost structure for the company to run its business. The development of a digital application will allow portability of the service, e.g. to inter-urban car parks, to facilitate rapid movement from one place to another in situations where, for example, public transport is not available.



Duration of the trial:

June - October 2022

Number of block trials: 1

Participating companies: 1

Kilometres driven: 700 km

Rentals: 37

Registered users: 30

Average length of rental time: 2h

Most rentals:

in June, almost 60% of all rentals during the trial, in July about 25%

Sustainable Development Goals



11.2, 11.3, 11.6



12.2

Shared use and storage solution for electric bikes on the block

CoReorient Oy

A Business model

CoReorient Oy develops sustainable circular and sharing economy solutions that support communities and society. The company offers, among other things, pawnshop services for housing associations and a digital platform for coordinating carpooling between individuals.

The pilot

In the trial, residents of a block of ten different housing associations were given access to two electric bikes. At the same time, the storage container was tested to see how it could be used as a storage solution for the large electric bikes. The storage container was placed in the parking lot of one of the housing associations in the block. During the trial, residents were able to receive bi-weekly advice on the use of electric load bikes. Residents had access to an electronic loan service to reserve the bikes, which opened the door of the storage container at the time of reservation. Residents who had a storage container on their plot were given free use of the wheels for the duration of the trial. Other residents in the block were able to use the service free of charge for 30 days, after which the service became chargeable.

Results

The storage container was found to be a suitable space for the loan of electric load wheels on the basis of the experiment. There was enough space for the bikes in the container and they could be moved in and out without lifting. A separate group was created in the existing e-lending service for the housing associations involved in the trial to lend them out. A longer trial period would be necessary to study the effects of seasonal variations.

Future

The high unit price of electric load wheels requires the entrepreneur to have a good investment capacity, even if the wheels are used all the time. A longer trial period would give a better picture of the use of the service and its variation, especially between seasons. If it is not possible to extend the service to a year-round operation, other solutions to maximise use are needed to improve profitability. One way would be to open up the service in the building's courtyard to external users.



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Trial period:

april-august 2023

Number of block trials: 1

Participating companies: 3

Number of cycles: 2

Total number of uses: 43

Registered users: 11

Average rental time:

approx. 4h

Total kilometres driven:

367 km

Average distance travelled:

7,5km

Sustainable Development Goals



11.2, 11.3, 11.6



12.2

HomeCommu neighbour help app for housing association

Commu Oy ja Muotoilutoimisto 2Loops

PILOT INFO CARD • CIRCULAR GREEN BLOCKS



A Business model

Commu offers a mobile app where individuals can request and offer help in their local area. 2Loops is a digital design agency that aims to promote sustainability challenges through design.

The pilot

During the pilot, the companies worked together to develop an existing application and its functionalities to serve housing associations. As it took time to find a pilot site, the actual trial period in the sites was short. Without the trial, companies would not have had the time or resources to develop this type of application. Based on the use of the app and the surveys, it was evident that making it easy to help and ask for help is in demand in housing associations and that the community spirit of housing associations is perceived as important.

Results

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Future

This solution has the potential to promote a sense of community and neighbourly assistance in housing associations and possibly prevent loneliness. In terms of further use of the solution, it is also important to find out whether, for example, the residents of a housing association are prepared to pay for the use of the application. An interesting possibility for further development would be to offer the service at neighbourhood level, thus broadening the scope of assistance. However, this would require identifying the right actor at the neighbourhood level (e.g. a neighbourhood association). The application should be cross-interfacing, as it is not desirable to use parallel systems.

Trial period:

January-May 2023

Number of block trials: 2

Participating companies: 2

Total number of registered users: 85 (M2-homes 22 and HOAS 63)

Duration of the trial: 2 months

In one site (M2 homes) 67% would recommend the app to their friends, while in the other site (HOAS) 71% would be unlikely to recommend the app (difference: competing existing app)

Sustainable Development Goals



Interactive neighbourhood information board

Superhood

PILOT INFO CARD · CIRCULAR GREEN BOOKS

A Business model

Unlike traditional social media services, Superhood is designed to be a local channel for businesses and local news, among other things. Through the app, you can find local services, public authorities, news, events, phenomena and discussions. Businesses can use the app as their own bulletin board.



The pilot

During the pilot, a company's neighbourhood page was launched, allowing users to follow news and businesses in their neighbourhood. The pilot integrated a commercial goods rental site (Renda) into the existing service, tested the use of an advertising site in cooperation with the food waste service ResQ, and integrated open data from the City of Helsinki on city events.

Trial period:

January - June 2023

Participating companies: 1

Results

The trial confirmed that the service is useful, despite the challenges of bringing it to market. In addition, it was found difficult to mobilise organisations producing content data during the trial.

Future

Based on the information gathered during the trial, version 2.0 of the application will be developed and piloted in Central Europe. The automation of the integration of different content sources will require further development with the company's content partners.

Sustainable Development Goals



Goods loan box as service

Lainappi Oy

A Business model

Lainappi offers a home contents rental service for consumer and business customers. The company develops easy and sustainable ways to make renting accessible and affordable so that as many people as possible can experience the benefits of renting.

The pilot

In the experiment, the company placed a box of boxes for the loan of consumer goods in two pilot blocks. The boxes contained items that residents were less likely to need, making borrowing an alternative to owning. The items in the box included a steam cleaner, a guest mattress, board games, yard games and tools. Residents were charged €1 per borrowing session. Loans were made through an app so that the doors of the box were opened according to the item the resident was borrowing. During the trial, the company visited the sites to demonstrate their service and the use of the box and conducted a feedback survey at the end.

Results

As a result of the trial, the company was able to develop its existing product and ideas for improving communication in the housing company environment. As a result of the experiment, it can be seen that there is a demand for sharing economy services in housing companies. Of the respondents to the feedback survey, 60% expressed an interest in renting their own goods through the service. The themes of sustainability and saving money were perceived as important in the rental business. However, the first pilot site did not receive any loans at all. This may have been due to the fact that renovation work had started at the same time in the housing association, which in practice made it difficult to access the collection boxes.

Future

The lending service aims to provide added value to residents without the need to own goods. The lending box concept needs a large enough number of residents to be successful and to be a profitable business for the company. This requires active communication through various media to ensure that information about the service reaches all residents. An alternative is a lighter service model with fewer products on offer, which also reduces the initial investment and the need for maintenance. Digital applications allow the entrepreneur to monitor how and when the service is used and to target the right products to the environment.



Trial period: december 2022 - february 2023

Number of block trials: 2

Participating companies: 1

No loans in the first pilot site, 12 in the second, of which

Number of users: 9

Rental period: 24h

What goods were rented:

Textile washing machine - 6 times

Steam cleaner - 4 times

Window cleaner - 1 time

Sustainable Development Goals



12.2

Rental of goods between neighbours

Lainappi Oy

PILOT INFO CARD · CIRCULAR BLOCKS

A Business model

Lainappi offers a home contents rental service for consumer and business customers. Through the mobile app, users can rent and hire their own household items, such as tools, sports equipment and party clothes. The free downloadable app serves as a tool for renting goods.



The pilot

In the pilot, Lainappi developed a feature in the app that allows residents of a housing association to rent their own goods among the residents of the association or a limited neighbourhood.

Trial period: Autumn 2022

Number of block trials: 1

Participating companies: 1

Results

Palvelulle ei kokeilun puitteissa löytynyt käyttäjäkuntaa.

Sustainable Development Goals

Future

Based on the experiment, the rental of goods between residents in the neighbourhood does not seem to offer opportunities for the development of a sustainable business model. However, as the experiment was only carried out in one location, it is possible that a similar service could work elsewhere. In this case, however, it would be essential to establish a sufficient number of users to make the rental service attractive and profitable.



Goods lending in a container

CoReorient Oy

A Business model

CoReorient Oy develops sustainable circular and sharing economy solutions that support communities and society. The company offers, among other things, pawnshop services for housing associations and a digital platform for coordinating carpooling between individuals.

The pilot

In the pilot, residents were able to borrow items such as washing machines and tools, which were placed in a storage container in the yard of one of the housing associations in the pilot site. The lending was done digitally using an app that opened the door of the storage container at the time of booking. The service was available not only to the housing association but also to the residents of nine other housing associations in the pilot site.

Results

The pilot gave the company visibility and feedback from residents to develop the service and to learn how to bring a similar service to the housing association sector. The service offered had to be adapted due to the sudden increase in electricity prices. The service remained available to residents after the end of the pilot programme.

Future

A similar lending room in a storage container can be moved to another building or to a suitable location in a suitable environment. Other services could also be added to the lending library service. However, a wider roll-out of the service in a housing association context will require more detailed planning to develop a suitable business model and an active dialogue, for example with the housing association's board, on the benefits of the service for residents and the distribution of costs. In addition, taking into account seasonal factors, such as high snow accumulation, will require further development of the concept.



PILOT INFO CARD · CIRCULAR GREEN BLOCKS

Duration of the trial:
april-august 2023

Number of block trials: 1

Number of participating companies: 1

Number of users during the trial: 44

Number of individual quotes: 55

34% of the users came from the housing association in whose yard the storage container was located.

The five most borrowed products:

Textile cleaner (19% of all quotes)

Cordless screwdriver (12%)

Steam cleaner (10.5%)

Window cleaner (9.5%)

Cordless hammer (9.5%)

Sustainable Development Goals

