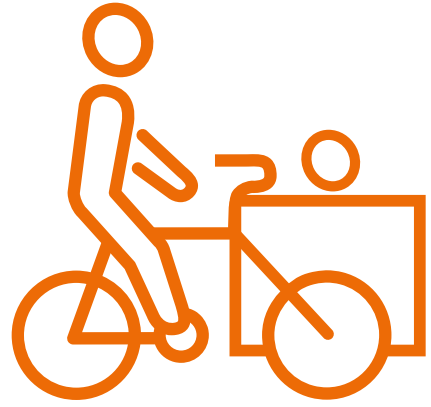




BICYCLE LIBRARY COOKBOOK

OUR FINEST COLLECTION OF RECIPES FOR
A SUCCESSFUL BICYCLE LIBRARY, COMPLETE
WITH INGREDIENTS AND DIRECTIONS



BACKGROUND

The purpose of this document is to inspire cities to start their own bicycle library and give some guidance on how to get started with experience from three different examples from the SUMBA+ project.

The bicycle library concept is inspired by a normal book library. But instead of borrowing books, a bicycle library lends out bicycles to residents in order to help them find a bike type or model that helps them complete their daily errands and commuting trips by bike. By being able to test different models, people have an increased chance of finding the right one that suits their unique needs. The purpose of the service is typically to provide the opportunity to “try before you buy” for those interested in buying a bike but unsure how it might work in reality. The goal is to replace car trips with bike trips in an effort for cities and municipalities to better meet their transport and climate related goals. The typical borrower of a bike from the library is one who is a regular user – those who will use the bike on a daily basis and want to own their own bike. This compared to the typical user of a bike hire system or bike pool that is more of an occasional user who does not have the same need to own the bike.





Step 1:

The bicycle library can take many shapes and forms: it can be a simple building or garage, it can be a network of bike shops, on wheels or automated. It provides residents access to bikes as a try-before-buy service.



Step 2:

Residents try different models to find the one that fits.



Step 3:

The goal: several more people use different types of bikes for their daily needs and active mobility is increased.

The bicycle library is a try-before-buy service that allows residents to test different bikes, like cargo and electric assist, for commuting or other transport purposes. The goal is to increase cycling, and broaden the types of bikes in use.

Why start a bicycle library?

Inspiration and motivation to start a bicycle library varies depending on the local context, such as in the three SUMBA+ cases that are at different phases:

Developing a pilot project into a more permanent service in Växjö, Sweden

With inspiration originally coming from Copenhagen and Malmö, Växjö considers the bicycle library as an important step in helping residents to discover new ways of commuting and traveling by bike. Everyone's travel needs and interests are unique, and this is why it is important that people find the right vehicle that meets those needs but also has the lowest negative impact on society and the environment. The bicycle culture of Växjö is quite one-sided with most people using a relatively simple city bike to get around. These types of bikes generally only suit short trips with little to no baggage. When travel becomes more complicated, for example when transporting small children to school or doing a run to the grocery store, the car is often seen as the only option. This despite that in other cities in Europe, such as those in the Netherlands and Denmark, cargo bikes are used as an alternative to the car. The bicycle library is therefore seen as a way to introduce and develop this cargo bike cycling culture, among other cycling cultures, into Växjö thus making travel with different types of bicycles more commonplace.

Växjö's bicycle commuting modal share is around 22%; however, according to a study, 75% of those who live and work in the city could bike to work in 15 minutes or less. With the municipality's goal of becoming fossil fuel free by 2030 and considering the city's well-established network of cycling paths and bike parking, the preconditions and policy exist for Växjö to be a very strong cycling city and even a good cycling municipality. One that could rival the Dutch.

Starting a new bicycle library in Tartu, Estonia

Bicycle use in Tartu has increased in the last decade from very low levels to around 10% of all commutes made within the city. However, there have



been some very real increases in bicycle use as well, mainly due to increased investment in bicycle infrastructure. In the last couple of years, a more rapid increase in cycling has been observed because of the creation of a citywide bike share system that has proven extremely successful. The bike share is operated by the city government and includes a mix of regular bikes and e-bikes.

In the near future large investments are being planned to build dedicated bicycle infrastructure designed according to international best practice. The goal, for which funds have partially been already allocated, is to build a network of bicycle paths in the city center by 2024 and other city areas by 2028.

All these promising preconditions gave us the courage to launch a new service – a bicycle library, which consists mainly of cargo bikes. There are various two- and three-wheeled cargo bikes in the selection, which are well suited for use by both individuals and companies.

Tartu's bicycle library "Velorent" was launched in January of 2021 and is a publicly operated scheme that is operated by a municipal sub-organisation. While there is a rental fee, the service is to a large degree subsidised by the municipality. The municipality decided to operate the scheme on its own going forward. This has numerous benefits for the user as private bike share schemes are known for their unreliability and often poor user experience. With a publicly run scheme, users can be sure of the continued reliability, affordability, and good user experience, especially as Tartu has ample experience with a much larger publicly run regular bike share scheme.



Performing a pre-study in Altona

With the goal of increasing the current share of bike mobility from 15% (2017) to 25% by 2030, the city of Hamburg set itself an ambitious target. As many means are necessary to achieve this goal, bicycle libraries can prove an important contribution to promoting the use of bicycles. This includes both the usage of regular bikes as well as cargo bikes for delivery and transportation of larger goods or fulfilling family tasks.

Since bicycle libraries are a new concept for Germany, the district of Altona drew a lot of inspiration from their European partners in Sweden, Denmark, and Estonia. They've set the knowledge basis upon which the bicycle library concept for Altona will be developed. Aspects such as the booking systems used, expenses during the procurement process, operator models and the overall reception of the bicycle library concept are especially interesting since they contain vital experience for future developments. Additional inspiration was drawn from the bicycle library in London. With its use of the characteristic London bus as the basis for the bicycle library, it gave an impulse to think more about mobile libraries.

RECIPES

RAW INGREDIENTS



Several basic ingredients are needed in the kitchen to make most recipes, including salt, pepper, oil, garlic and onions. A selection of herbs and spices, flour and yeast are good to have on-hand. Similarly, to start a bicycle library a few preconditions are useful, and sometimes necessary, to get started. They include:

- **A good network of cycling infrastructure**, separated from car traffic or on roads with low car volumes and speed, that create safe spaces for cyclists to ride. It is also important that this network accommodates larger and specialty bikes, like three-wheel cargo bikes, that need more space to maneuver.
- **Secure bike parking** is necessary, especially for large and expensive cargo bikes that are targeted by thieves. These should be locked and under a roof, away from rain and snow and be located at major transit hubs like train stations, as well as housing and workplaces.
- **Importers or distributors** of the bicycles you would like to include in the library should be available in the country. This to ensure availability if those who try the bike wish to buy the same model.
- **Local bike shops** should be available in the city and have the ability to maintain and service these bikes. Some specialty electric bikes for example have complicated drive systems that require special training to maintain and troubleshoot. This training may be hard to find in some cities.
- **Good knowledge** of the type of commuting and infrastructure to help tailor the bike fleet to the relevant needs of the residents.
- **Bike savvy residents** are more likely to experiment with new types of bicycle such as cargo and electric and can be useful early adopters for the project.
- **A plan for how to handle theft and damage to the bikes.** This should be clear for those borrowing the bike what their responsibility is.

BICYCLE LIBRARY WITH LOCAL COOPERATION

Växjö's bicycle library started in 2019 as a pilot project with funding from two Interreg EU projects: SUMBA and Cobium. 22 bikes of different model and type were lent out a total of over 200 times during the two-year pilot project. A unique feature of Växjö's bicycle library is its cooperation with four local bike shops that administer lending and service of the bikes. The aim of the project was to help residents test new ways of commuting and travel by bike using for example cargo bikes to transport children to school and folding bikes to better combine with public transit. Different models of electric bikes were specified that suit, for example, longer commuting on gravel bicycle paths that connect Växjö city with neighbouring villages and countryside.

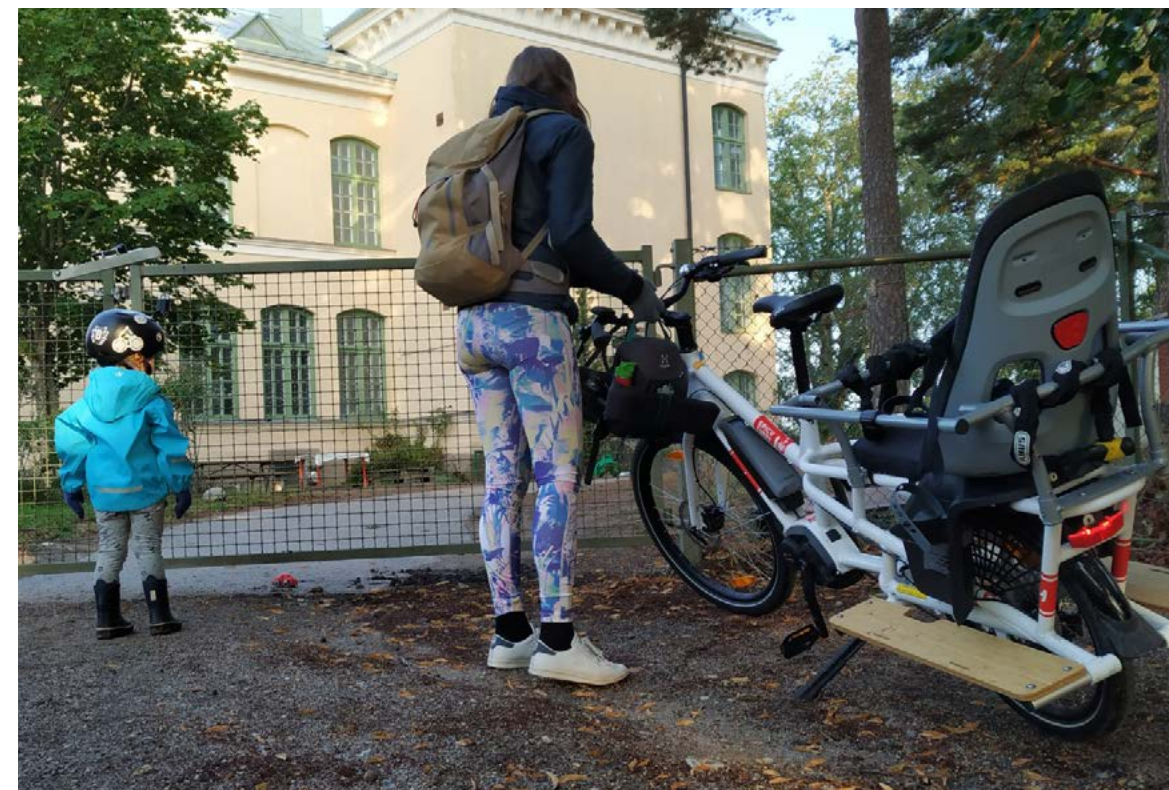
The pilot project in Växjö was successful and the feedback in participant surveys was very positive. More than half of the respondents were prepared to buy a similar bike as the one they tried. But the survey did point out that high cost (for cargo bikes for example) were a barrier to purchase.

Feedback from the participating bike shops and other actors revealed some other positives effects of the project:

- Additional resellers of cargo bikes in Växjö and new cargo bike brands being introduced to the local market
- Increased number of cargo bikes and specialty bikes on the roads makes these bikes more visible and mainstream and can inspire others to think about these alternatives to the car.
- New forms of bicycle leasing were started as part of the bicycle library at one bike shop. This was to help make the bikes more accessible to some people without having to commit to an expensive one-time purchase but rather a fixed monthly fee during a yearly contract.
- The project will continue with help of the extension project, SUMBA+ with financing of a new booking system and website for the bicycle library.

INGREDIENTS

- **At least one bike shop** that is interested in partnering including serving the bicycle and participants who borrow the bikes. Even better is a small network of several shops to help broaden the scope of the project and create a greater sense of participation and ownership. Useful feedback from the bike shops helps to improve the project and the service to the participants and increases the chances of success.
- **A wide variety of bicycles** of different types and models helps people to find the right solution for their unique needs and interests. This in turn requires a substantial budget for the project.
- **Digital booking system** that administers booking of the bikes and communication with users. It is helpful if the system administers reminders at the start and end of the lending period to be sure the bicycle is picked up and dropped off on time.
- **A digital survey** that is sent to those who borrowed the bikes to gain feedback on how the bicycle library worked, as a service including the partnership with the bike shop, how the bicycle worked – quality and function, and the infrastructure available was well-suited to this new type of travel by bike – including feedback on parking, cycling paths and traffic safety.
- **Good exposure** by local media outlets helps to kick off the project from the beginning.
- **A lending fee** paid by the participants. This helps the project be more self-sustaining, encourages people to think through what bike they borrow and attracts those that are seriously considering buying; in addition the fee can make it easier for home insurance to partially cover costs to theft and damage since it is more of a bike “hire” when there is a fee involved.
- **A clear breakdown of roles and responsibilities** of the different stakeholders involved, included in contracts with the bike shops, administrators (booking system) and borrowers.



METHOD/DIRECTIONS

1. Hold meetings early with potential actors, bike shops, distributors et-cetera to gauge interest and outline the project, including bike types to be included and their availability. This time is used to also help define the terms of borrowing, for example what happens if the bike is damaged or stolen, and to identify areas of responsibility between different partners/actors in the library.
2. Give time for procurement and purchase, especially with slow transport times during COVID-19 and with some bikes that sometimes are built according to order.
3. Know your market, what bikes are relevant to the local context, user and target group(s). In Växjö, cargo and electric bikes are most popular.
4. Communicate! Social media works really well and press releases usually result in articles in local papers. This is a good opportunity to include the local shops in the communication work.
5. Involve the politicians and policy-makers since they influence investments and new cycling infrastructure. In Växjö the first lending period was reserved for politicians who had the opportunity to test the service and different types of bikes for themselves. This can help secure funding for a more permanent service later.
6. Gather data, including a survey to gather information on users' experiences with the bikes, infrastructure and their plans to buy a bike for themselves. This will help evaluate the project and make any adjustments that might improve its rate of success. Indicators can include satisfaction index in the survey but also sales of cargo bikes for example which can be shared by the different partners to see the development over time.
7. Consider the time it takes for service between lending periods and if your bike shops have several bikes they need to service. What do they manage with? And are all bikes picked up or dropped off on the same day? This can result in long wait times if several participants come at the same time.



TARTU
ESTONIA

BICYCLE LIBRARY WITH CARGO CYCLING IN FOCUS

Velorent has been operating in Tartu since the beginning of 2021. During the early portion of the project, there were three bikes available to rent to individuals as well as organisations. In the autumn of 2021, the service was upgraded with support of project SUMBA+ by 14 additional cargo bikes. The main idea behind Velorent is to rent out the cargo bikes for longer periods (usually at least a week) to allow people and organisations to try a cargo bike as part of their daily routines and errands. If they find it suitable for their needs, they are encouraged to buy their own cargo bike.

INGREDIENTS

- **Different types of cargo-bikes** to help borrowers find the right solution for their needs.
- **A digital booking system** that is convenient and easy-to-use.
- **Common lending point** that is easily accessible for users and for bike service.
- **Informative website** with details about terms of lending and the different types of bicycles available.
- **Help from the local media** to help kickoff the project and inform residents.
- **A cycling enthusiast** with the right know-how to maintain the bikes and to help explain the use of the cargo bikes to borrowers.
- **Clear instructions** on how to use the bicycle. In the case of Tartu, instructional videos on their website are used to do this.



METHOD/DIRECTIONS

1. All ingredients are needed, but they must be dosed sensibly at first. The project can be started with only a few bikes at a time and scaled up at a later date.
2. Ask individuals and businesses what mobility needs they have to create a suitable bicycle library. This can be done, for example, through an online survey.
3. You can start with private individuals and then move on to companies who maybe routines that are more difficult to change.
4. Allow enough time between different rental periods to provide a buffer for when people don't return the bike on time, so that it doesn't affect the following booking.
5. Stay positive. Initially, you have to be prepared for long working days, because it takes time to get used to new things and users have questions at any time of the day.
6. Ask users for feedback. This way you will get the necessary information on how to develop the service and what people want.
7. If possible, buy quality tires because they are more durable and maintenance is faster and cheaper.
8. A maximum lending period (eg. 1 week or 10 days) could be set at the start of the project. With a shorter lending period, more people can try the bikes and have the opportunity to try different models.
9. Where possible, help users plan daily routes based on people's normal movements. In this way, faster and safer solutions can be found and make cycling more enjoyable.

BICYCLE LIBRARY FOR EVERYONE

As it is important to promote bicycle use city wide, it is necessary to include disadvantaged districts of the city in terms of mobility and infrastructural capabilities. Furthermore, the access to bikes for everyone is worth striving for in a modern and diverse city. In order to advertise cycling in general and make new bike models accessible for many people, the municipality of Altona is planning the development of a mobile version of the bicycle library.

The main idea is to convert buses or trucks to hold all the necessities of a bicycle library. Those buses could be parked temporarily in different neighborhoods and offer the benefits of a bicycle library without the needs of long-term structural integration. Target locations would be the outskirts of cities and disadvantaged parts of the city, meaning areas not well served by public transport. The pilots in Sweden and other countries have shown, the main user groups are families and elderly people. As those groups typically account for the most households on the outskirts of towns, the focus is on cargo bikes with children's seats, children's bikes and e-bikes for elderly people.

The mobile bicycle library concept can, on the

one hand, be beneficial for areas with higher population density and less (public) space available for a fully integrated library in a building or container. Those areas can include dense inner-city areas, with a temporary parking space available for the mobile library. On the other hand, a mobile version of the bicycle library can benefit areas with less population density where a permanent installation would lack frequent users.

Apart from the objective of a bicycle library to make different types of special bicycles available for a trial period, it can offer a chance for people who normally do not use bikes at all. Therefore, it can be beneficial to also include common push bikes and bikes for kids. From 2011 to 2012 the project "Unabhängige Mobilität aber sicher? Integration er-fahren" (Independent mobility done safe? Experiencing integration by riding) was funded by the national bicycle masterplan to encourage children and women with immigration background to use a bicycle in their everyday life. Projects such as this can be included in a bicycle library concept to widen its possibilities and to familiarize people with bike mobility. This can increase the active mobility for individuals with previously limited mobility options.

INGREDIENTS/METHOD

- **Associations or NGOs** with an access to the desired peer group disseminating the project idea.
- **Different types of special bikes** that are newly bought or donated and fixed up for a variety of user groups including families, elderly, businesses, daily commuters etc.
- **Digital booking system** such as white label or open source with easy access also for less tech-savvy generations (e.g. a basic booking calendar).
- **A transparent and easy to understand booking process.** Terms and conditions should support people feeling responsible for the bikes but also less anxious since damage is covered by insurance.
- **Low fees for participants** in the first trial period to encourage many people to use the bicycle library.
- **Convenient lending point** in a public space or commercial setting (not a parking garage) to create a good experience for the borrower and to improve exposure of the service to passersby.
- **A mobile lending point** from for example a converted bus or truck and a temporary parking space if needed. This helps broaden the outreach of the bicycle library and to areas of the city, such as lower income, that might otherwise not have easy access to such a service but would benefit greatly from it.
- **A “bicycle librarian”** who can operate the service and give an introduction on how to use the bikes and give support during the lending period.



MAKE YOUR OWN

Recipes generally need to be customised or improvised depending on available ingredients, time to prepare and the experience of the cook! It is similar for a bicycle library — time, resources and local context influence how the bicycle library can be set up and function. Here are a few tips for creating your own bicycle library:

- A bicycle library can be started with as few as one or two bicycles and a simple booking process. The service can always be scaled up at a later date depending on interest level from residents and resource availability and gives the opportunity to learn as you go.
- Some smaller cities have lent out one or two electric and cargo bikes through their normal book library since there already exists a reservation system, staff and storage available.
- If the municipality has a department dealing with technical issues, it is advisable to run the bicycle library internally to ensure a quality service with relatively low cost. If this is not possible, you can definitely work with a bicycle shop or workshop that will provide maintenance for your bicycles.
- It is advisable to look for support options and funding instruments for the purchase of bicycles. Such support schemes exist in different countries and can be related to different development priorities such as sustainable mobility, active lifestyle, integration and access, clean air and EU funding is of course an option such as in the cases of Växjö and Tartu.
- Use your media partners to inform residents and promote this new opportunity for them to test new cycling culture. In addition, involve different actors early in the development process – they can help you spread information about the service.
- Set a good example yourself and use some different bicycles in your daily work. This helps to also gain a familiarity with the bikes and their use in reality.
- Each municipality typically has a group of bicycle enthusiasts and this could be the core group (early adopters) that helps the service, and cycling in your city, gain momentum.
- It is quite likely that the bicycle library is not a business venture but will help to solve mobility and logistics problems in the long run. Consider the necessary costs to maintain the service and the bikes over the long run and be sure budget is available if significant repairs or changes need to be made.
- Be careful to avoid competing with local businesses such as bike hire companies if the city or municipality is running the service. Some may view it as unfair competition that attracts negative critique and could shut down the service. Växjö overcame this by inviting local businesses to participate in the project.

The SUMBA+ project is an extension of the main stage project, SUMBA (Sustainable Mobility and Commuting in Baltic Cities). The project aims to help cities, regions and other organisations to promote sustainable mobility through policy, planning, analysis tools and communication. More information is found at sumba.eu.

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