

Smart Shrinking in peripheral areas in cases of Punkaharju and Leie

Nord+ Intensive Course

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Introduction

Punkaharju

Punkaharju is a former independent municipality that has been a part of Savonlinna since 2013. It is within the South-Savo region. It is surrounded by lake Puruvesi, itself a part of the larger Saimaa lake. Punkaharju is known for its ridge landscapes which have attracted admirers to the area from the 19th century or even earlier. Punkaharju's landscape is one of the national landscapes of Finland and is protected by the state. Parts of the landscape were already taken into protection by tsar in 1843 when around same time Kruunupuisto was also established.



Figure 1. The location of Punkaharju (Visit punkaharju.fi).

According to Päivi Oinas, Punkaharju's population has decreased since the municipal amalgamation from about 3700 to 3200. Depopulation processes are typical: Young people are going elsewhere in search of better educational and job opportunities. Meanwhile, the population is aging and the need for services is growing. Despite the small population, every year approximately 192 000 tourists visit the region. The visits take place mostly during the summer. (Kokkonen, 2022) Also, Punkaharju is the most important working area in the region apart from Savonlinna.

Punkaharju is known for its several tourism destinations and services which are located near railway stations Retriitti and Lusto. There are a couple of hotels, a health resort, the Lusto forest museum along with some other points of interest. The basic service center is located further away next to a third station. Major services there include an elementary and secondary school, a health center, a library, a restaurant, a café and a shop, all of which are located within walking distance from each other.

Punkaharju is an agriculturally dominated area but also includes the forest industry group Metsägroup which employs more than 500 people. Additionally, there is some metal

industry in the region. A railway goes through Punkaharju that serves the forest sector, tourists, and locals' access to more diverse services in Savonlinna.

In regards to the urban development plan, the forestry sector and tourism have been recognised as the main strengths of Punkaharju. The aim of the plan is to develop the identity of Punkaharju, to promote entrepreneurship, and to improve the overall comfort of the area. (Punkaharjun taajaman kehittämissuunnitelma) At the moment, an EU project is under way for a green gold cultural road to highlight the cultural heritage of punkaharju and valuable ridge landscapes.

The development of the area aims to involve increasingly more different age groups and to broaden cross-border cooperation with different actors. In particular, the older population and part-time residents are seen as valuable assets.

The Punkaharju nature

Punkaharju has always been an important public passway and an area of special natural beauty. State authorities have played an active role in deciding how the Punkaharju area is to be managed since 1803. The experimental area has since been enlarged through bequests (inheritances) and land purchases, and now comprises about 1850 ha of land and about 800 ha of lakes and waterways. This state-owned property “is to be utilized and managed primarily to meet the needs of research and the esker area in accordance with nature protection and landscape management norms”. At present about 650 ha of the land area is taken up by various experimental plots. The rest is reserved forest where intensive commercial forestry is practiced (Mikkola, 1985).

The terrain in the Punkaharju area is highly diverse in altitude and soil type. The stand compartments are small and varied - owing to reforestation practiced in the area. The Punkaharju area thus offers an exceptionally varied environment and an extensive range of different types of landscape. Plants characteristic of the Punkaharju ridge include alpine milk-vetch (*Astragalus alpinus*) and *Oxytropis campestris*, bog-myrtle (*Myrica gale*), which is common along the shores. Rare species like hemp agrimony (*Eupatorium cannabinum*) can also sometimes be found. The rich and varied flora of Punkaharju also leads to an extensive fauna. Foxes and badgers roam freely in the area, and even racoons can occasionally be seen. Wood pigeons (*Columba palumbus*), wood grouse (*Tetrao urogallus*), and many species of woodpeckers are some of the birds which nest in the area (Mikkola, 1985).

Individual trees with the best production and quality have been gathered over the years in Finland for tree breeding purposes. These trees, called plus trees, have the following selection criteria: above-average production, good stem form, long and dense crowns, thin branches, thin

barks. As these properties are all inheritable, tree breeding has utilized plus trees to produce better seedling material for the commercial forestry sector. The inheritability of the characteristics of this tree are clearly visible in its progeny growing in the area (Mikkola, 1985).

Punkaharju business and services

Lack of variety of services is a problem in Punkaharju. There are some main services such as kindergarten, school, grocery shop, cafe etc., but still Punkaharju lacks service diversity. There are not enough entertainment services that would potentially attract both young and old people, and make village age friendly for all ages. In Punkaharju there is an active forestry industry which is the largest employer and income source in the area. In this chapter the main focus will be on the services that were covered by authors within fieldwork and can already be usable for village development.

The Lusto museum

The Lusto museum is a national forest museum that is located in Punkaharju. The museum's building was finished in 1994 by architects Rainer Mahlamäki and Ilmari Lahdelma, and is considered representative of Finnish 20th century modern architecture. The Lusto extension was opened to the public in 2008, and by then the building regulations allowed the use of more wood in the building, including the frame.

In the museum, visitors can see both permanent exhibitions and temporary exhibitions which change time after time. Permanent exhibitions include information about forestry industries history, machines and developments, as well as Finnish forest inhabitants. There is also a tourist information center (TIC) located in the museum. In the TIC tourists can find information not only about Punkaharju area but also about Savonlinna municipality overall.

The Lusto museum produces its own solar power and it is heated using renewable bioenergy produced by a local district heating company. The museum holds workshops for students every year, which are focused on environmental issues and sustainable development. For these and other reasons, the museum considers itself to be part of sustainable tourism.



Figure 3. The Lusto museum's exterior.



Figure 4. The Lusto museum's interior.

The Art Manor Johanna Oras

The art manor was founded by Finnish multidimensional contemporary visual artist Johanna Oras. The art mansion is open every day from 10AM to 6PM and its entry is free of charge. At the art manor, visitors can see Johanna Oras' artworks both inside and outside of the manor's territory. There are also art workshop classes held in the main building. The art manor advertises itself on both social media and on a personal web page. On the web page there is an opportunity to look at the virtual presentation of the art mansion.



Figure 5. The Art Manor Johanna Oras.

Kruunupuisto

Kruunupuisto is a health resort in the Punkaharju area and is located in the historical Takaharju Sanatorium building. The building has a long history that reaches as far back as October 1st 1903, when the sanatorium was first opened. The building accommodated approximately 100 patients, and was equipped with modern electric lighting and central heating. After a long and complicated history, the building has become a part of Kruunupuisto health resort. The current name Kruunupuisto – Punkaharjun kuntoutuskeskus (Punkaharju Rehabilitation Center) was adopted in 2003. The business is operated by Kruunupuisto Oy, established in 2006.

The resort is committed to the Sustainable Travel Finland responsibility program. Kruunupuisto was awarded the Sustainable Travel Finland label by Visit Finland in June 2021.

Kruunupuisto offers a variety of age-friendly health services, SPA treatments and sport activities. The resort advertises itself both on social media pages and personal web page.



Figure 6. Kruunupuisto Health Resorts entrance.

Connectivity and movement in Punkaharju

Punkaharju is located along public transport routes and is easy to reach by water or car. The distances from Punkaharju vary - Savonlinna is about 35 kilometers away, and Helsinki, the capital of the country, is about 344 kilometers away. There are several major connections to the area - the main road of Finland (highway 14), which runs through the entire municipality of Punkaharju, goes from Juva to Parikkala via Savonlinna (Nationalparks, 2022). Another way to get to the former municipality of Punkaharju is by train. There are three train stations in the area - Punkaharju, Retretti and Lusto. The train runs from Parikkala to Savonlinna every three hours and stops at Punkaharju, and the journey from Parikkala to Punkaharju takes about 20 minutes. The fastest way to get to Punkaharju (e.g. from Savonlinna) is by train 744, which costs 7-11 euros and lasts 29 minutes. Punkaharju can also be reached by boat from Pihlajavesi and Puruvesi. Punkaharju can also be reached by traditional steamboat from Savonlinna (Nationalparks, 2022). There is a direct bus departing from Olavinkatu 46 and arriving at Kauppatie E, and it is also accessible from Punkaharju from Savonlinna. It departs once a day and runs from Monday to Friday, and the journey takes about 52 minutes (Nationalparks, 2022). The easiest way to get from Savonlinna to Punkaharju is by car, which costs 4-7€ and takes 32 minutes. Also it's possible to get around in Punkaharju on foot or by cycling, however, it's more popular in the summer because there are good paths for these activities in the area (Thewanders, 2018).

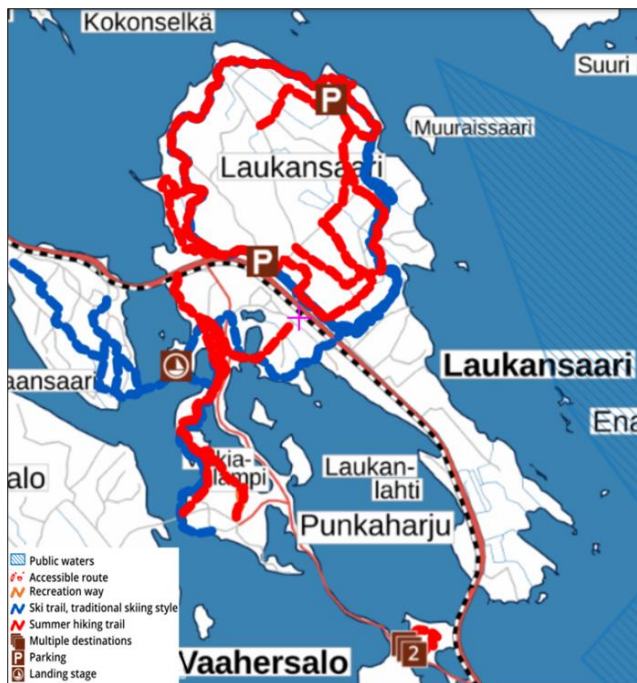


Figure 17. Map of Punkaharju transport and hiking trails.

The condition of the roads in Punkaharju is good, there are a lot of parking lots. One of them is the Kuikonniemi parking area, Harjutie 223, Savonlinna. There is space for approximately twelve cars. Another one would be “Research Park” parking area, Puistometsäntie 14. Space for approximately twenty cars. In these parking areas during winter maintenance, the area may be smaller. There is also a parking area in the Lusto (Nationalparks, 2022).

Locals living in Punkaharju often mentioned that the connection in the area is quite poor and most of the residents leave the area due to poor connection here. There are only intercity buses in the area, there are no local buses, and residents of the village of Putikko said that the local railway system is lacking. Locals said that additional train stops between Punkaharju and Parikkala would create a stronger bond with Savonlinna and it would be easier to access services in the city or in other places. The train stop would make it easier for residents who do not have their own car and cannot get to the city with it. Traveling by taxi is not a good alternative since it is quite expensive for ordinary people. Although there are 3 train stops, near Punkaharju, there is quite a big gap between the Punkaharju stop and the Parikkala stop, residents said there was a station in the village of Putikko for a long time, but in 1991 it was closed due to low numbers of residents using it. Locals also said there is currently a debate going on about the station in the village of Putikko, deciding whether or not to restore it.



Figure 18. Former Putikko train stop.



Figure 19. Train stop in Retretti.

Developing Putikko

Putikko is a village in Punkaharju with ~35 houses with exteriors that are protected by the municipality. Additionally, there's a culturally valuable village road that can be seen in the image down below. A number of the protected houses are empty and are in need of refurbishment. Putikko was once involved in the forestry industry with a sawmill being located in the village. Currently, storage is the sawmill area's only function.

In the village there are about 300 residents. Many of them are living elsewhere and have a second home or a summer home in Putikko. The residents are quite often artists or other creative professionals. A small but rather tight-knit community has formed in the village. Most people know each other and neighbors occasionally help each other out as needed.

The "plan" of the residents of Putikko is to develop the village into a sort of an open-air museum and become a part of a larger cultural entity in Punkaharju. However, the aim is to avoid mass tourism to keep the village comfortable to live in. To that end, they would also like to have a railroad stop reinstated to the village that would improve accessibility. Improving the accessibility is a possible way to attract people with the same values and lifestyles as the locals to move there.

The main challenge is to solve the accessibility problem. The locals of Punkaharju want to have an extra stop, however it would not exactly resolve the railroad development problem. Railway companies alone would only consider the profits and the costs of railroad construction. Another issue is that the trains are empty ninety percent of the time which also does not exactly improve the situation.

One of the requirements to attract visitors in Putikko is services, such as summer coffee and other functions. Punkaharju has plenty of services and destinations that could work together to improve the transportation system and increase the accessibility. Furthermore, Putikko has a relatively large number of active residents, who have wide networks to develop Putikko services and Punkaharju as a whole. In addition to developing the region for virtual tourism and trying to manage the railway stop station, cooperation with local actors is also needed to organize services and transport connections in order to facilitate living in Putikko and to avoid the current great need for a car. The role of the third sector is emphasized in the organization of Putikko's tourism-focused services.



Figure 22. Putikko village in Punkaharju.



Figure 23. Hotel Punkaharju that is run by



Figure 24. Lusto train station. There is a lot of art along the station.

Introduction of Leie

Leie is a village in the eastern part of Viljandi parish, in Viljandi county (figure 1). It has a surface area of 14,2 km² (Maa-amet, 2020). The village was formerly a part of the Kolga-Jaani parish. It, along with Tarvastu parish and the former Viljandi parish were merged during the administrative reform of 2017 (Riigiteataja, 2017). Leie had a population of 187 in 2021, 27 less than the 214 residents the village had in 2015 (Urb *et al*, 2021). This report involves not only the village of Leie itself but the surrounding region with its villages as well.

Leie is located next to the Tartu - Viljandi highway, about 1.5 km north of lake Võrtsjärv, the second largest lake in Estonia. To the east and northeast of Leie is the Aalm-Pedja Nature Reserve, consisting of wetlands, forests, rivers, and floodplains (Loodusega koos, n.d.). The 20.1 km long Leie ditch passes through the village (Keskkonnaagentuur, n.d. 1). The sacrificial stone Leie Kalmetikivi is within the village area, on the northern side of the highway (Kultuurimälestiste register, n.d.).

The area is well-suited for agriculture, with various cultures being grown north of the Tartu - Viljandi highway (PRIA web map). The local school and “Anthill” (Sipelgapesa) kindergarten share a building in the village and have been a single educational institution (Leie School) since September 1st 2021. A beauty salon, the local youth center, and a library also operate on the school’s premises (Leie School, 2022). Most tourist attractions near the village are oriented towards summertime activities (Puhka Eestis, 2022). Iglucraft OÜ, a company producing igloo-inspired huts, saunas, and offices, has been operating in the area since 2014 (Iglucraft, n.d., Inforegister, 2022).

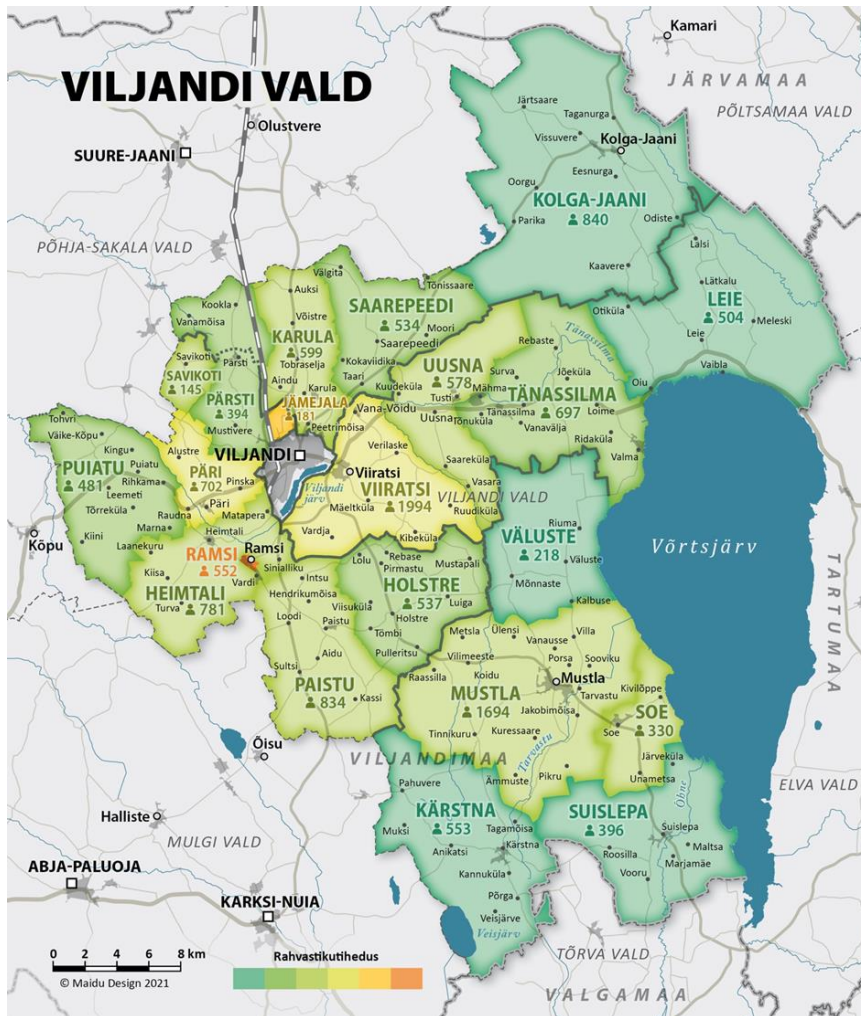


Figure 2. Areas of Viljandi parish, their residents and population densities (Urb *et al*, 2021).

Materials and methodology

In Punkaharju, four local people were interviewed. The first interview had one participant, while the second one had three participants. In Leie, there were eleven interviewees altogether, where one of the conducted interviews had three participants and another interview had two participants.

The interviewees were inquired about their thoughts and opinions on the region they live in. Their responses were being written down, while one of the interviews with the participant's consent was recorded.

The interviewees were from different age groups, each of them had different qualifications and worked in different fields which gave the students a deeper understanding of their places of residence. Each interviewee introduced themselves, their field of work and qualification and described their experience of living and working in the concrete region. Interviewees also mentioned what could be improved in this region so it would not shrink or

disappear completely, or at least would have the possibility of adapting to the current situation of their region.

In addition, photographs of various buildings, tourist attractions, interviewees' working and residential places were taken in both regions.

Leie area nature

Leie is located on the Võrtsjärv Lowland. The lowland has an area of 1747 km², over a third of which is covered by wetlands. The terrain is rather flat, relative changes in local elevation are limited to 2-3 meters. The lowland formed through a combination of glacial activities and the following accumulation of sediments in the early Holocene. Võrtsjärv is the current remnant of the "Greater Võrtsjärv" lake that covered the entire lowland during that period. Soil in the region surrounding Leie is high in moisture and suitable even for more demanding tree species such as oak, elm, ash, maple, and linden (Arold, 2005).

The eastern part of the Leie area is within Alam - Pedja Nature Reserve (Eesti kaitsealad). Within the Leie region is Kivisaare species protection region established for the protection of lesser spotted eagles inhabiting the area. The protection region also includes an ancient settlement that is under heritage protection (Keskkonnaagentuur 2).

Living in Leie

While conducting the interviews, the respondents were asked questions about background, working place and also their opinion of Leie. The interviewees came from a quite diverse background, most of them had different fields of work and qualification. Their opinions of their living place quite varied as well.

The respondents' fields of work varied between pedagogy, agriculture, tourism, architecture and other professions. Five of the respondents had mentioned that they drive long distances to their workplace (e.g. from Tartu) while others live nearby. However, even the locals many years ago used to live in another city or village. Some of the respondents mentioned that having another residence in town can be useful in certain cases.

Another notable thing about Leie is that there are activities for most age groups, starting from the age of a kindergartener to an elderly person. For example, the Leie School gym is not only used for teaching their students, but the gym is also open to adults for sports. In the school hall, events have been held for the local community. Leie also has sailing activities, organized by "Võrtsjärve sailing center & Veldeman holiday home", for the local people and tourists. For example, there is a Yacht club event every month which brings people not only from Leie but also from other villages. However, one of the respondents said that they don't have huge cultural

events, and the Kolga-Jaani leader should organize more cultural events so the locals would not have to go too far away.

In Leie there is a school bus system that picks students up from different villages and takes them to school. There's also a general rural bus system. The bus system is meant for better accessibility so the locals of Leie could get around. However, some of the locals had complaints about it. Their opinion was that while there is a good bus connection to Leie, the timetable does not match the buses heading to larger towns and is inconsistent.

The interviewees were asked what could be improved in their opinion, and two responses were repeatedly observed. Firstly, several locals thought that the public transport network is not really supported, many buses drive long distances and take a long time to get to their final destination. The potential problems long distances could cause for the elderly were also mentioned. Secondly, the shopping is very basic, meaning that a lot of products cannot be bought in Leie, only in other places, like Kolga-Jaani. In Leie, there is a fuel station with a tiny shop, and several of the respondents hope to see a bigger one. There is also a need to create more housing opportunities in the Leie area in cooperation with local government, businesses and financial organizations, according to one of the respondents because there are not enough houses in the area.

One of the respondents was quite optimistic about Leie and its development, their views for the future were positive and they do not think that the area is dying out yet. They mentioned that there are some new families around and moving in.

Leie business and services

There is a significant problem with the lack of services in Leie. Village has one general practitioner. Because there are no shops in Leie, one of the main things interviewees highlighted as a necessity for the development of the village services was the need for a grocery store. Another thing highlighted was the need for more regular public transports. This chapter will cover main business and services located in Leie.

Leie School

Leie Primary school was opened on the 1st of September 1995. The building used to be an old farming house which was later used for the foundation of the school. A number of children were living around in Leie which led to the decision to form the school. Originally, the building was planned for 192 students, however the biggest number the school has reached is 142 students. Leie Primary school is located on the northern shore of Lake Võrtsjärv in Viljandi

County, Viljandi Parish, Leie Village, 30 km from Viljandi, 40 km from Tartu and 17 km from Kolga-Jaani.

The school's building is multifunctional - in addition to the primary school, the Leie School Kindergarten "Anthill", the Leie Open Youth Center and the Leie Library operate in the school building. The school's gym is used for teaching and for conducting youth center activities. In the evenings, the gym is open to adults for sports. The school has a grass-covered football field, a long jump box with a running track and a children's playground. The territory of the school is suitable for both outdoor learning and sports.

However, during the last few years, the student count in Leie Primary school has been decreasing. The smallest number of classes in Viljandi municipality are in Leie Primary school, and in several classes there are no students. The staffing and performance indicators of kindergartens show that there are few children per employee in the school (Urb *et al*, 2021). Already in 2014, there was discussion about closing down the school because of the student shrinkage, and at that time, there were 50 students attending the school. Partially due to the talks of closing the school, the student count shrunk even more because the parents took their children to other schools out of fears of Leie School closing. According to the interviews, the latest attempt to close the school was in 2019. There haven't been any further attempts but the interviews indicated the question was coming back into discussion. However, closure of Leie School would go against the target of providing children quality education within 15 km of their homes outlined in the local municipality's development plan (Viljandi, 2018).

Now some classes are combined, for example the 1st and the 2nd grade, and are learning most of their subjects together. In September 2021, Leie Primary school and the kindergarten were merged together into one organization - Leie School. Now there are twenty students in the school and nine children in the kindergarten, and the academic staff is around ten people altogether, including the ones who are in charge of the heating, cleaning and lunch.



Figure 7. Picture with Leie's primary school class photos from different years.

Throughout the interview, the respondent explained as to why there are teachers coming to this school from a 50-70 km distance, and the answer was that these teachers find this school lovely, the small class are an advantage for them, as well, and the school compensates the cost of the fuel.

When asked about their opinion of Leie in general, the school staff mentioned that they would like to have a store in the village. They don't have enough cultural events either, and in their opinion, the Kolga-Jaani leader should organize more events and cultural events so the locals would not have to go too far away. Years ago there were more frequent events, like midsummer day and Christmas day celebrations, and the school hall was used for these types of events because it has the biggest hall in Leie. However, Covid-19 had an impact on the occurrence of events because of the Covid restrictions for the last two years.



Figure 8. Leie Primary School's exterior



Figure 9. First and second grade's class.

Iglucraft

Iglucraft has been working in Leie since 2014. There are 30 employees, from which most are not locals. Some of the employees live up to 60 km away from Leie. There are other similar companies in Estonia, but the main reason why employees choose to work in Iglucraft is because of the high professionalism of workers. All employees work full time and usually a work day at Iglucraft factory is from 8AM to 5PM. There is only one employee who works at night shift due to the specifics of his work. Iglucraft employees have different education levels according to their position.

Iglucraft has three main products – saunas, house offices and huts. Every centimeter of Iglucraft building is carefully designed and every product is designed according to the client's individual needs. That is why product interiors vary but exterior retains its distinct Iglucraft design. Products vary and can weigh between 1 to 3 tonnes. All Iglucraft products come with a warranty. As stated by an Iglucraft employee, the exterior of the product can last up to 40 years even without particularly consistent care. Each client is given a manual of how to take care of the building.



Figure 10. Iglucraft products at building process



Figure 11. Iglucraft hut's interior during the building process.

Right now Iglucraft is renting an old Leie's kolkhoz building for its factory, but they are planning to expand and have bought nearby land in Leie to build a new factory. Iglucraft chose to locate its factory in Leie because of two strategically important reasons. Firstly, maintaining a factory in Leie is cheaper than in Tallinn, Tartu or Pärnu. Secondly, Leie is relatively close to many of Estonia's largest towns. It takes 2 hours to drive to Tallinn, 40 minutes to drive to Tartu and 1 hour 30 minutes to drive to Pärnu. The owner being originally from the region also played a part in the selection.

Iglucraft has an advanced marketing team which takes care of their online presence. They have a webpage where they engage their clients not only by practical information, but also by company blog. At first Iglucraft was looking for resellers and had them in 70 different places in Europe, but after a while the company understood that it was not a good marketing strategy for them. Iglucraft have showrooms in many different countries, including the United Kingdom, Estonia, Belgium etc. The company focuses on finding clients who agree with their design ideals. Iglucraft products are bought all over the world. Most of the transport is done by trucks but they use airplanes for overseas deliveries.

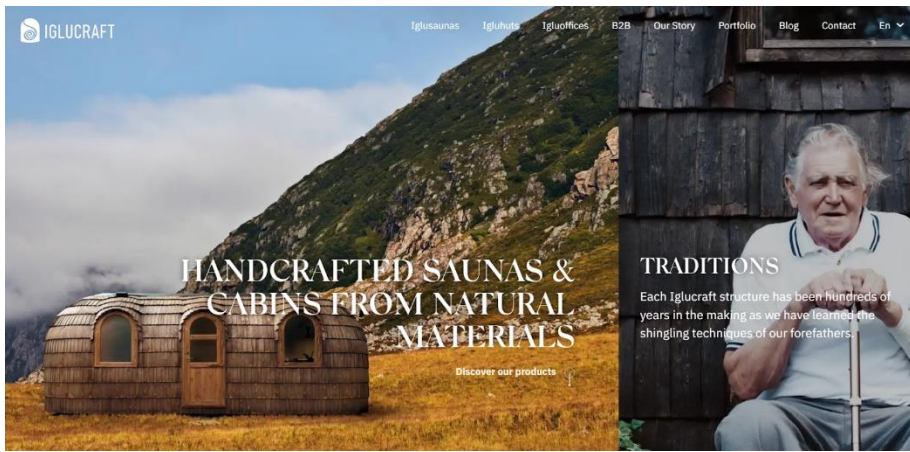


Figure 12. Iglucraft webpage.

Koorti Kartul OÜ

Koorti Kartul is an agricultural company located in Leie that grows potatoes and carrots. The company was founded in 2005 and at the beginning had 12 around year employees. Right now the company has stable working with 7 around year employees. All Koorti Kartul employees are Leie locals.

The main aim of the company was to add value to the market chain. The development of the company has taken 15 years to reach its current state. Due to the EU's free market policy it is hard to compete with larger EU vegetable sellers. Additionally, there are products for which demand has decreased, for example carrots. In the beginning, the company used 40 hectares for carrots, but now they have reduced it to 10 hectares.

Koorti Kartul mainly sells to large store chains but their customers also include companies who make soups and other canned products. Because of world events like the war in Ukraine, prices are constantly rising, but the main beneficiaries are product sellers, not the vegetable producers themselves. Koorti Kartul stands out among other companies with their high product quality, which is one of the highest in Estonia during the last 5 years. All of their products are certified by the EU. One of the main challenges is to retrain the cleanliness of their products. The company mainly sells their products in Estonia but they have foreign connections through their current contract with Norika, a company based in Germany.

Koorti kartul has machines partially founded by the EU but largely themselves. There are machines able to make 24 packages in 1 minute. In a year Koorti Kartul produces 2000 tonnes of carrots, 500 tonnes seed potatoes and about 1000 tonnes potatoes.



Figure 13. Machine that measures carrots.

With help from the EU LEADER programme, the company has established 2 shops. One of the shops is located at the same place as the factory. Reason for this is that the factory is located by Kolga – Jaani – Leie road which has a lot of travelers on weekends who are interested in their production.

The Reason why Koorti Kartul company has chosen Leie as their location is both because of the land's good soil and logistics. Company claims that Leie is perfect for logistics as it is relatively near to the center of Estonia and thus equidistant from several sizable towns.



Figure 14. Koorti Kartul webpage.

Võrtsjärve sailing center & Veldeman holiday home

Veldeman Holiday House and sailing center is located on the northern shore of Lake Võrtsjärv, near Leie. The company was founded in 2019. They actively work from May till

September. In the holiday home there is room space for up to 45 guests. Usually in their active season there are tourist groups every weekend who stay there for two days. During the summer season, the business has approximately six employees. Most of the clients are Estonians and rarely foreigners. A lot of the customers are fishermen or summer camp organizers. They also cooperate with yacht club Meltemi that has almost 40 members. From spring to autumn business also organizes sailing trips to more distant destinations, for example to the Mediterranean Sea and Caribbean Sea. With the EU's LEADER programm they can get up to 60% funding for their business activities. They got LEADER support when purchasing yachts for business purposes. Võrtsjärv sailing center has three yachts for adult use and four yachts for children. For advertising the business uses social media and also has two web pages. The reason why Võrtsjärve sailing center & Veldeman holiday home owners chose Leie for their business is both due to the good location by Võrtsjärve lake and the location's history of yacht sailing.



Figure 15. Veldeman holiday home.



Figure 16. Võrtsjärve sailing center

Connectivity and movement in Leie

Leie is a village located on the national road 92, which runs from Tartu to Kilingi-Nõmme, providing easy access to the rest of the country. The distances between the different cities vary, from Leie to Tallinn is 154 kilometers, from Leie to Tartu is 49 kilometers, from Leie to Pärnu is 132 kilometers, from Leie to Viljandi, which is the municipality center, is about 30 kilometers. The fastest way to get to Leie (e.g. from Viljandi) is by car, it takes about 25 minutes. The cheapest way to get there would be by bus, which runs from Viljandi to Leie 3-5 times a day and costs about 1-3 €. There are a total of 11 bus lines that run through Leie. You can also get to Leie by taxi, but this is the most expensive way as the price is around 50 € (Rome2rio, 2022).

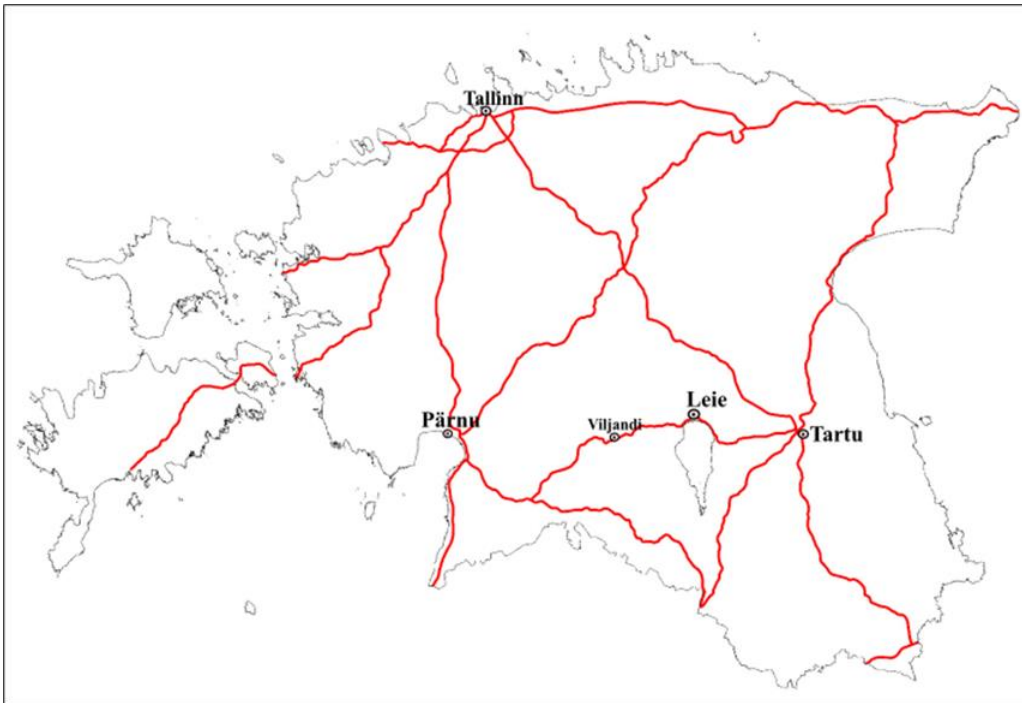


Figure 20. Estonia road map with cities.

The condition of the roads in the village of Leie is quite good, much of the road has been repaired at the initiative of the local community. There are no parking spaces in the area, but the car can be parked near the school or other public places.

Most locals said the connections to nearby towns were very good and it was convenient for them to get from Leie to Tartu or other cities. Some people can work remotely from home, so they live in the village of Leie, although their place of work is in Tartu or other cities. Residents who live in Leie said they live here because there is beautiful nature around, quiet and easy access to other cities by car. However, there were also a number of residents who said there was a lack of roads, and needed to improve them and maintain them better. Residents who use public transport (buses) or their children have to use public transport also said that bus connections were not good and should be improved. For example - there is no convenient time for children to travel to school by public transport, and some buses travel very long, making it inconvenient to travel to work or other places, so the most convenient way to get to Leie is by car.



Figure 21. Roads in Leie.

Discussion

In 1899, the Finnish Tourist Association (FTA) pointed out that the nature reserve of Punkaharju in Southern Savonia would make an ideal location for a large national park. It was made as a nature reserve in 1803 to protect the esker forests from further logging, and Punkaharju had since become an iconic tourist attraction. The association pointed out that Punkaharju was already valued as a de facto national park with its ‘wonderful open lakes’ that would ‘compel the visitors to show devotion and admiration’ for this ‘sanctuary of nature’ (Niemelä & Ruuskanen, 2019). The problem is the poor connectivity in Punkaharju. For example, there aren’t enough nature trails in the forests surrounding Punkaharju. Also, public transport is quite rare in Punkaharju which makes it hard to get around. The easiest way to get around in Punkaharju is driving by car because it takes little time to get from one place to another. However, it is inconvenient for the visitors of the youth circle from age 16 to 18. Furthermore, with the rising fuel prices, the problem will only continue to escalate.

While there were cafes, restaurants and a hotel in the city center, in the region's outskirts there were barely (if any) of these establishments. This means the outskirts should be developed alongside the Punkaharju center. The reason for that is because in the outskirts there are unique nature objects and points of interest. There could be established a recreation center not just for the local people of Punkaharju, but also for the tourists from other countries.

The connectivity situation in Leie has its problems as well. Though the village is relatively far from larger towns and cities, its location next to a major road makes it easy to move between Leie and either Viljandi or Tartu. That does, however, require a personal car which brings similar problems as in Punkaharju. The infrastructure is in a servisable state,

though there are problems with certain roads. Public transport has good connections with Leie village but the timetables don't always line up with buses going to Viljandi or Tartu. The lack of a proper store in the village is also a problem. Accommodation in the area exists but is much more likely to take visitors in the summertime. There's a similar situation with cafes and other dineries.

People, who are often patriots of their region or village, have a chance to invest their own funds or raise the funds of their partners for regional development. Both places require grants, direct investments and other financial aid in order to become more visited and recognised. This can be achieved by pooling funds or by approaching investors. If in Finland it is easier done, because the standard of living and income is higher, then the village in the middle of Estonia can only attract a really wealthy entrepreneur who is ready to develop it. Entrepreneurs may be interested in the nearby Lake Võrtsjärv and its possibilities for active recreation by the lake.

Conclusions

- Populations of both the Punkaharju and Leie regions are shrinking. Due to the higher overall population of Punkaharju, there are more activities that still continue, which is contrasted by Leie and its usually weak sense of community. Notable exceptions to that are large projects (road reconstruction, church restoration) that have brought the locals together.
- Nature is more diverse in Punkaharju - there are more tree species, the flora and fauna is more variegated because of the forestry. Leie, however, is largely covered by agricultural fields, with less diversity and flora and fauna.
- Punkaharju has a quite developed road infrastructure, there are rarely any potholes on the road. There is more housing in the area and the population is more dense and higher than in Leie. The population in Punkaharju is 3702, while in Leie it is 187.
- There are more services in Punkaharju, like the grocery stores, cafeterias, museums, fuel station and many more, while Leie has pretty much none of those, except for a fuel station with a tiny shop.
- In Punkaharju, fields of work are more diverse as well, though lacking in high-education jobs. Examples include working in forestry, agriculture, metallurgy, as a salesman in a shop, a waiter in a cafe or hotel, an employee in a health resort etc., while in Leie there are fewer options for fields of work.

- Punkaharju has more potential as a place for culture than Leie - it has more tourist attractions, some of them are considered historical, while Leie's main cultural attraction is a church with a long and colorful history.
- During this field study a qualitative method was used – interviewing, overall ten interviews were conducted.
- The student count in Leie Primary school is shrinking, in the whole Viljandi municipality the smallest number of classes are in Leie School, and in some classes there are no students at all. Closing the school would mean a further decrease in population and accessibility in the area.
- Both areas have successful companies - in Punkaharju's case Lusto Museum and a health center Kruunupuisto, while in Leie there are Iglucraft and Koorti Kartul OÜ, whose products are well known in Estonia and abroad (in Iglucraft's case, worldwide). Võrtsjärve sailing center & Veldeman holiday home is also quite known in the Leie area, organizing events, such as camps for children, and their clients are mostly Estonians and tourists from other countries.
- Most of the respondents from Leie think that there are improvements needed for the village, this includes improvements like more cultural events, an improved bus system, and more housing opportunities. The need for housing has to be addressed in cooperation with the local government, businesses, and financial organizations. A good strategic location, soaring fuel prices, and continuing improvements to remote work possibilities lead to increasing potential for people of various backgrounds to move to the region or have a second home there.

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