Tool 1: VTAB – Regional context description Värmland/Sweden

WP3 Värmlandstrafik (VTAB)

Contents

Introduction

In accordance with the ITRACT project, Värmlandstrafik is planning to develop an ICT solution (e.g. a mobile application) with information about public transport available in *one place* (including information on both on-demand and line services). The information will be reliable, easy to comprehend, relevant and user-friendly. Examples of content include: real-time information about vehicles, information regarding payments, delays, timetable and other changes, as well as bookings of on-demand transport services.

Värmlandstrafik will thus complement the existing public transport system with an ICT-based information service. While the focus will be on the information necessary for work commuters, the aim is for all our passengers to benefit from this new information service.

In order to limit the scale of the project it will only encompass Säffle Municipality, more precisely, the Värmlandsnäs peninsula, where Värmlandstrafik will create better conditions for work commuters.

The report follows the structure of Work Package 3 (WP3.1).

1 Customer needs

At Värmlandstrafik (VTAB), knowledge about the Värmland customers' needs is gained through:

- *Kollektivtrafikbarometern (Kollbar)*: A quality and attitude survey (industry-wide). Monthly. Based on interviews. Target group: public, 15–75 years of age (both users and non-users of public transport)
- *Boomerang*: Internal system to address customer queries
- Customer satisfaction surveys
- Customers' fora on the VTAB web and social media (e.g. Facebook, Twitter)
- Counting journeys and studying travel behaviour

Customers' public transport needs in general

Important for travellers in general:

- Time: frequency/travel time/latency (*väntetid*)
- Reliability
- Proximity to bus stop
- Vehicles and stops: comfort/safety
- Drivers: competence/commitment/driving (*körstil*)
- Information: available/usable, user-friendly
- Price

Unattractive public transport – what was dismissed/rejected in public transport?

- Difficult to use
- Critical events (unwanted experiences)
- Not reliable/safe
- Feeling that you have no control of the situation (need for control)
- High price
- Identity (not getting confirmation of your own self-image and identity)
- Being dependent
- Uncomfortable

What do non-users think?

- Public transport must become more attractive (unspecified)
- Nothing can make public transport attractive
- Lower price
- Increased supply
- Shorter travel time

What will make motorists use public transport? There is no simple answer to the question, but some important points are:

- An efficient public transport system is a cornerstone
- Find the right routes, plan for public transport
- Being able to perform their daily activities is important
- Satisfaction with travel is important
- Motorists who try to use public transport *may* be public transport users; the hard part is getting them to continue use

Customers' public transport needs in rural areas

Source: Kollbar

The needs of public transport users in rural areas

- Time: fast/short travel time
- Ease of use
- Reliability
- Relevance

Customer demands in relation to combined journeys (source: Börjesson, 2012):

- Ease of use
- Reliable service from start to finish
- Reasonable pricing
- Good connection points
- Safe connections

- Time for connections
- A complete-journey perspective

Travellers' information needs

'There is a feeling of great dissatisfaction when it comes to local public transport in Sweden. In particular, the information on delays and disruptions is far too poor, according to three out of four Swedes' (*Dagens Nyheter*, online, 09-02-2012).

Värmland is no exception to the rest of Sweden. According to Kollbar, the inhabitants of Säffle have the following opinions about public transport information:

- 60% think it is easy to get information about departure times
- 47% think it is easy to purchase tickets
- 37% think information about changed timetables and routes is satisfactory
- 25% think information about delays and disruptions is satisfactory
- 51% think it is easy to travel with VTAB
- 36% know how to travel with VTAB when it comes to most of their trips

In terms of customers' information needs concerning public transport, the following are important:

- The customers want information that is available, usable and user-friendly
- An application has to be easy to understand, easy to use and at the same time provide accurate and relevant information of high quality

This information could:

- Mitigate or even prevent certain critical situations
- Increase the customers' sense of control, e.g. by allowing them to plan their journey in the best possible way and perhaps reduce the waiting time
- Contribute to public transport being perceived as less complicated

Information needs among work commuters' in Värmland:

- *Access to combined information about both on-demand and line services.* This need can be found mostly among passengers travelling on timetabled/line-based on-demand services and who need information about other public transport line services (trains, buses) to enable connections. It is important to provide a complete picture of a diversified public transport system, as well as a complete-journey perspective.
- Information about disruptions (e.g. delays, cancellations and changed timetables). Information that is correct, up to date and easy to access and comprehend.
- Increased opportunities for 'spontaneous travel' with line and timetable-based on-demand services and complementary services. Ensure every potential passenger receives information that a trip has been booked, e.g. via a text message, informing them when someone in the same area has booked a trip. Those who want to travel as well could, through some form of simple confirmation, sign up for the same trip.
- *Facilitate private car-pooling in rural areas.* In sparsely populated areas, car-pooling can be a good alternative for work commuting and journeys with connections. An important part of the ambition to provide a complete-journey perspective.

2 Target Group

Target group selection and description

Our target group will be *commuters*. This is motivated by:

- One of VTAB's prioritized goals is to broaden and enlarge the local labour market area
- Stable, sustainable development requires better possibilities to commute to work and school
- Värmland has high unemployment rates and a decreasing population
- There is a need to broaden the labour market in Värmland
- School commuters are an important ground for establishing public transport awareness
- An ICT application that includes information about both on-demand and ordinary line services is useful not only to the selected target group but also to others

We are going to concentrate our pilot tests on one or two areas: Säffle (and Sunne). The choice was based on the fact that the transport system in these areas has been developed to support commuting to work (in urban centres). The new elements of the transport system are: new or changed bus lines, more departures (buses and trains), fewer stops (less travel time) and improved on-demand services.

Description of commuters

Commuting is steadily increasing in the region, but there is still a great deal of untapped commuting potential which would facilitate an expansion of the regional labour market. Today, accessibility within the county is lacking in several areas, partly due to long distances between the municipal centres, and partly due to the low standard of the public transport system. The time it takes to travel by train or bus often prevents daily commutes to work and school. Greater accessibility is pivotal for the growth of the regional labour market and for people to have access to higher education, culture and social networking. The access to Karlstad University is also of strategic importance.

Commuters' travel chains

A commuter's daily routine can be described through a *travel chain* – a number of travel profiles based on real-life cases. The travel chains of families with young children who commute using public transport are shown below (Gottfridsson). The travel chains represent commuters with daily recurring travel chains and commuters with varying travel chains. Travel chains linked to commuter profiles provide examples of different commuter behaviours.

TRAVEL CHAINS TO WORK:

Travel chain 1: Home – Workplace

Travel chain 2: Home – Nursery school – Workplace

Travel chain 3: Home – Nursery school – Errand – Workplace

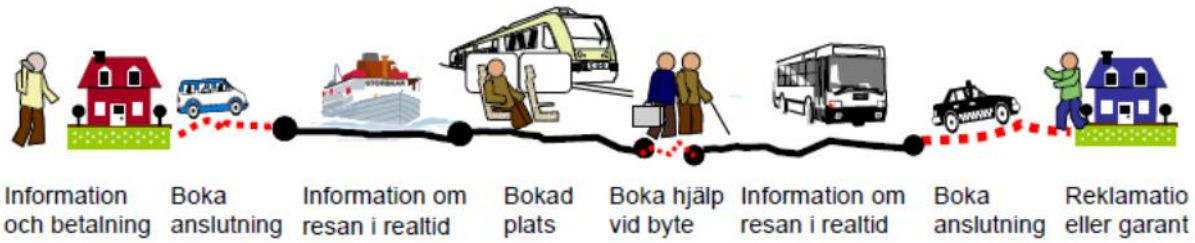
Travel chain 4: Home – Nursery school – Errand – Errand – Workplace

TRAVEL CHAINS FROM WORK:

Travel chain 1: Workplace – Home

Travel chain 2: Workplace – Nursery school – Errand – Home

Travel chain 3: Workplace – Nursery school – Errand – Errand – Home



3 Transport Challenge

Public transport can never replace the car in a geographical area such as Värmland, but public transport can be a realistic alternative for commuters living in towns and commuters to and from urban centres.

Is it possible to have public transport in rural areas? The inhabitants in rural areas:

- Are few and they live sparsely
- Have cars to a great extent
- Travel mostly by car
- Lack entrepreneurs in transport

Travel is so infrequent that it is difficult to study travel behaviour.

- Public transport is a small part of total travel
- 9-10% a few times per week or more often
- Commuters to schools/higher education institutes/universities are an important foundation/basis
- Journeys to activities

Transport challenges in the region

From a general point of view, the key to success for public transport in rural areas can be said to rest on the same principles as public transport in general: for people to have access to time-efficient travel with few stops or connections; to be able to get on/off within a convenient distance, and to avoid long waiting times. In rural areas, long geographical distances and a sparse population make it expensive to maintain a public transport service of high quality, and thus good conditions are often lacking. It is important to note that all public transport in rural areas should be seen as a complement to and not as a replacement for the car.

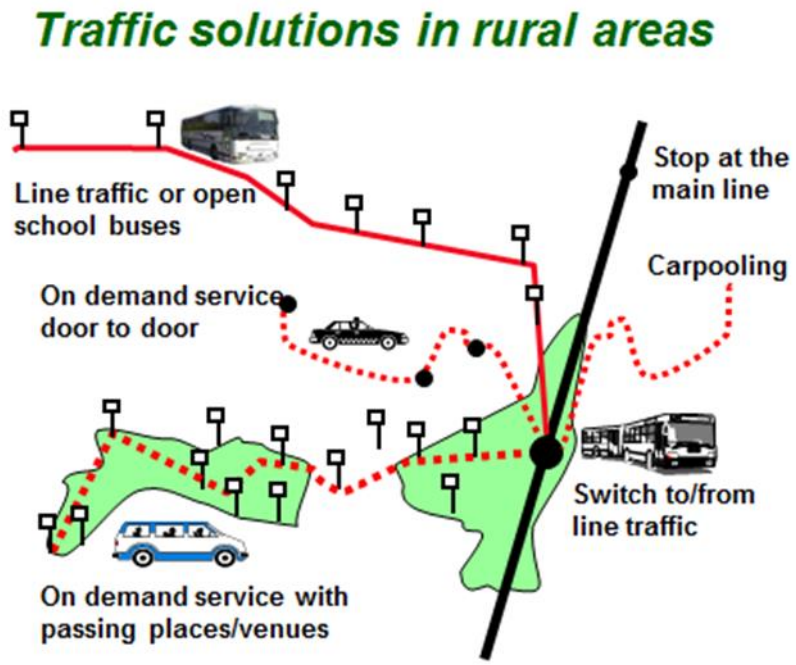


Figure 1: Public transport solutions in rural areas

For passengers to reach the stops along the main lines in a comfortable and safe way, connecting modes of public transport and/or safe foot/cycling paths have to be in place (the complete journey perspective). Figure 1 above shows different transport solutions for rural areas, which can be combined. *On-demand services* have been used with great success in rural areas. Since such services only run when there are passengers, this is a cost-efficient solution in areas where there are no great transport demands. An on-demand service which has a given destination and runs according to a timetable is the most successful model. Great potential can be found in combining timetable-based line services on a number of main lines with feeder services from various peripheral areas that have on-demand services. Despite the relatively high success of on-demand services in rural areas, there are a number of problems that need to be dealt with:

- The low departure frequency in public line services, to which the on-demand service often connects
- The fact that travel has to be booked in advance

- Departure and arrival times are unreliable as travel has to be coordinated with other users, leading to limitations in the number of departures and destinations
- A complete-journey perspective, where the customer's needs are put in focus, is often lacking
- What purpose should the services have? Is it a matter of maintaining a minimal service level with the aim of offering elderly people transportation from their homes to the nearest municipal centre a few times a week, or should it be about offering an excellent alternative to public transport, enabling both work commuting and travel for leisure?

4 Regional Context

Regional Context – Värmland

Värmland is one of 21 counties in Sweden. It borders Norway, with Oslo just 100 km away. From the county boundary in the east, Stockholm is 250 km away. Companies involved in pulp and paper, the chemical industry, and steel and engineering are traditionally strong here. Today they have been joined by other sectors, such as ICT, packaging, food, tourism and culture. Many people also work in the public sector – in the municipalities, the County Council and other government agencies. Main land use: 70% woodland, 9% water and 7% agricultural land.

Compared to Sweden in general, in Värmland:

- The population has low average income
- The tax levels are high
- There is a decreasing and ageing population (20% are over 64)
- The average age is high (43.5 years)
- The level of education is low
- The unemployment level is high (9.5% of the workforce)
- The level of sick leave among the employed is high (7.5%)

There are 16 municipalities in the county of Värmland (see Figure 2). In terms of area, Torsby is the largest and Hammarö is the smallest municipality. However, in terms of population the county town of Karlstad is the biggest, with around 88,000 inhabitants, and Munkfors, with around 3,700 inhabitants, is the smallest. In ITRACT, VTAB will focus specifically on the municipality of *Säffle.*

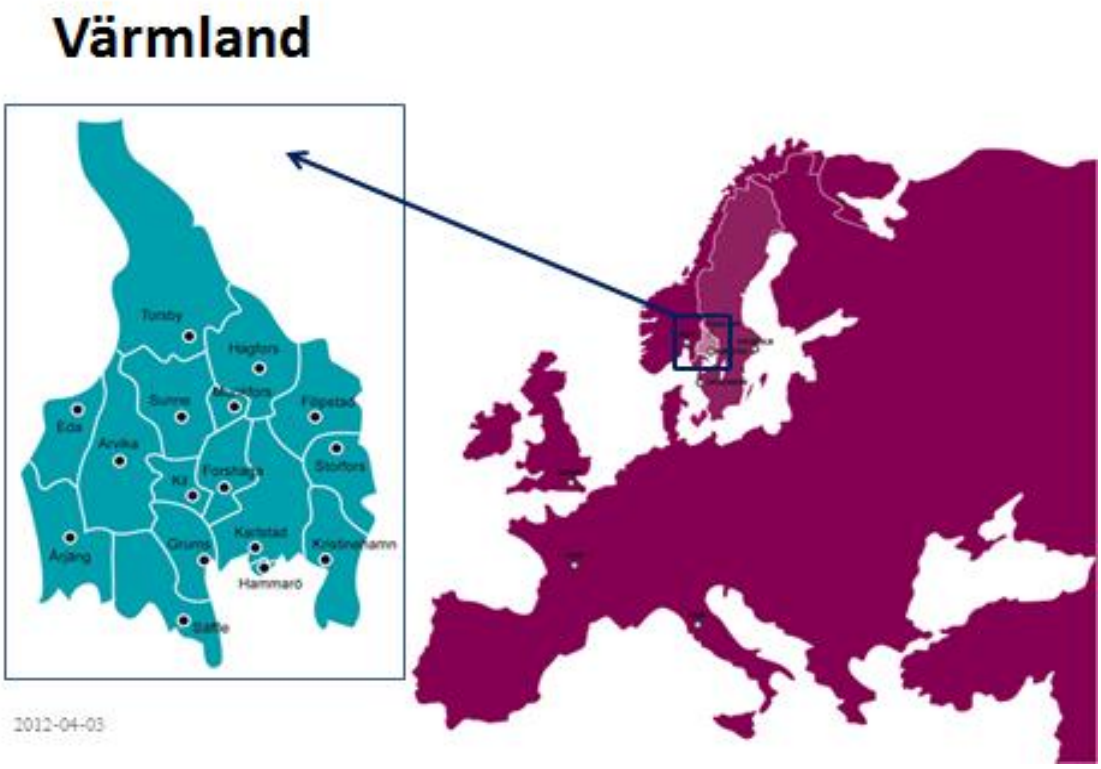


Figure 2: Värmland

Organization of public transport in Värmland

Public transport in Sweden is regulated by law, and organized by a Regional Public Transport Authority (a PTA) in each county. The PTA in Värmland is an organization called 'Region Värmland'. Region Värmland works on issues such as regional development, growth and infrastructure planning in the region (issues relating to railways, roads, shipping and aviation). It is a politically controlled organization (the politicians are not directly elected, but are selected indirectly by the delegates of the municipalities and the county council). The main task of Region Värmland is to provide a long-term regional policy perspective on the public transport system and express this in a 'programme of service supply' and decisions about 'the obligations of the transport service'.

Värmlandstrafik (VTAB) is a *Regional public transport organizer* (PTO) and provider of public transport in the county of Värmland (not including the municipality of Karlstad). In short, Värmlandstrafik contracts and manages all buses, trains and taxis used for public transport in the region, as well as public

transport from and to the region. Värmlandstrafik is owned by the municipalities and the county council through Region Värmland. The owners finance the equivalent of half the budget and the passengers the other half.

The main tasks of Värmlandstrafik are to:

- Coordinate joint needs of passenger transport
- Increase the county's accessibility to urban areas
- Expand the labour market

The services are outsourced and provided by privately owned operators. Värmlandstrafik buy services from operators through a public procurement process that describes the service provision requirements. Värmlandstrafik and the operators have different roles and responsibilities, as shown in Table 1.

Table 1: Responsibilities and roles in the inter-organizational business relationship

Värmlandstrafik (PTO)	The Operator
• Buys the service • Writes the contract and requirements • Plans the service • Indirect contact with customers • Owns the brand • Secondary equipment owner (ticket machines, radio systems in vehicles, bus stops with information boards, etc.) • Provides education	• Sells the service • Receives the contract and requirements • Provides the service • Handles direct (face-to-face) contact with customers • Carries the brand • Primary equipment owner (vehicles, except for the trains, owned by the PTA) • Receives education

Public transport in Värmland

The regional public transport network is of great importance to the growth of a common labour market in Värmland and to bring it closer to neighbouring regions. By enabling daily commutes by bus and train, people's access to work and education will improve.

Värmland is a rural area where most transport occurs on roads. About 400 buses and 200 smaller vehicles are in service on the roads in Värmland every day and in addition there are 15 trains running. The transport services managed by Värmlandstrafik (2010) include:

- Inter-regional buses and trains
- 89 regional bus lines
- *4 train lines* driven by the operator Tågkompaniet
- *Urban services*: 23 lines in three towns (but not in Karlstad where the municipality itself drives the urban services and owns the bus company Karlstadsbuss)
- *The mobility service/transportation for the disabled*. A special form of public transport for those who are unable to use general public transport due to a disability
- *Service lines*, mini buses that are modified for the disabled
- School buses/school services in 15 municipalities
- *On-demand services* (taxi or mini-buses)
- Patient transport service

Some figures relating to public transport in Värmland (2011):

- 15.1 million scheduled kilometres
- 8.6 million journeys (bus, train, school buses, special public transport)
- 1% increase in travel (bus +/- 0%, train + 6.4%)
- 78% satisfied customers
- Every citizen in Värmland contributed SEK 978 to Värmlandstrafik through taxes
- In total, the public transport system in Värmland receives SEK 630 million from taxes each year
- 143,651 cars in the county (526 cars/1000 inhabitants)
- Average distance travelled: 22.86 km

The map below shows the main bus and train lines in Värmland

Market situation in public transport

The total number of passenger kilometres travelled along roads, railways and seaways in Sweden has increased sixfold since the 1950s. Public transport has, however, decreased from 49% in 1950, to 18% in 2009. Today, only 24% of the inhabitants in Sweden choose public transport for their daily travel. A united public transport sector has therefore decided to double its market share by 2020. In Värmland, this is to be done by increasing public transport by 3% every year.

Travel by public transport is steadily increasing in Sweden. The number of trips (recorded in terms of the number of boardings) made using public transport increased 19% over the last decade. Trips have increased by 3% over the last year alone. Trips by bus have shown the greatest increase, representing over half of the total increase in trips, while journeys by light rail, train and underground have also increased.

While the use of public transport in Värmland has thus slowly increased since the mid-1990s, in relation to the use of buses and trains at the national level, Värmland is below average. Altogether, public transport in Värmland accounts for approximately 10–12% of total travel in the county today. Commuting to school/higher education institutes and work are the most common.

On an ordinary weekday in Värmland, most of the travel is work-related. Today, around one fifth of those employed, work in a municipality other than where they live, and the distances that people commute has almost doubled over the past 50 years. More people also travel longer distances to do their shopping or leisure activities than a few decades ago. The explanation for this development can to a great extent be found in the fact that more people have access to a car.

Today, half of the population in Värmland has a car. The car is and will most likely remain the most important means of transportation for many of the people in the county. The extent of car ownership is higher than in the rest of the country.

Surveys on travel habits also show that residents in Värmland travel more in their cars than the average person in the country at large. According to regional figures estimated by the Swedish Transport Administration, the use of private cars in Värmland will increase by 1–9% by 2020. In certain parts of the county, the increase will be even greater – the traffic to and from Norway, for example, is thought likely to increase more than the regional traffic. Over the past five years, traffic across the border has increased by about 25%.

A clear majority of the people using public transport in Värmland travel by bus. However, the greatest potential for future travel most likely lies with the train service in the county, partly because the speed it offers may contribute to more commuting and thus also regional expansion, and partly because it is perceived by many as a better alternative to the car than a bus service, and thus has greater competitive capacity to attract more passengers.

Conditions for public transport in Värmland

There are *good conditions* for public transport in Värmland. It is strategically a good location, between the three metropolitan areas of Stockholm, Gothenburg and Oslo. Furthermore, the region has access to the infrastructure of all four modes of physical transportation – railroads, roads, seaways and airways. This makes it possible to combine different types of transport systems, which can both increase efficiency and benefit the environment.

- Karlstad Airport, one of the most modern airports in Sweden, offers regular *flights* to Stockholm and Copenhagen, as well as charters to Spain and Greece. The county also has two airports in Hagfors and Torsby, with regular flights to Stockholm.
- *The regional roads*, which are of particular importance to the connection with neighbouring regions, including Road 61 to Norway, Road 63 to Bergslagen and Dalarna, and Road 172 to Västra Götaland. The roads are important for commuting within the county, to other regions, and also to Norway.
- The *national roads*, E18 and E45, also play an important role in Värmland's connections with neighbouring regions, as well as the metropolitan regions of Stockholm, Gothenburg and Oslo.

- *The railroads*, the Värmland Line and the Vänern Line, are also important to Värmland's connections with both neighbouring regions and the metropolitan regions of Stockholm, Gothenburg and Oslo.
- The less beneficial conditions for public transport in Värmland concern above all, the great distances to the metropolitan regions, as well as the distance between different municipal centres within the region.

Thus, increasing accessibility within as well as to and from the region is a key factor if Värmland is to grow and assert itself as a competitive region.

Measures to increase public travel in Värmland

Värmlandstrafik is working towards the coordination of public transport in the region, creating better connections between the different public transport systems and other forms of transport. Important points in our work are:

- *Connection points* which link several different means of transportation. Several municipal centres already have such connection points; however, Karlstad is still lacking a travel hub which integrates connections between buses, trains, cars, bikes and pedestrians.
- *Easy access and useful information* on how you can use the system – marketing of public transport.
- Coordination of timetables and routes, as well as payment and information systems.

Värmlandstrafik's strategy for regional train and bus services aims to contribute to the economically, socially and environmentally sustainable development of the region. This requires:

- *Commuting by public means of transport should be facilitated* to expand the regional labour market. Education-related trips (e.g. to Karlstad University) are also included here.
- The main lines, which are used by trains and buses, should offer frequent, fast and regular services more or less 24 hours a day. Main lines to larger towns without a train service should be prioritized over other main lines with a bus service.

- *The regional and the interregional train services provide important conditions for further regional expansion*. The regional train service along the Värmland Line, the Norway/Vänern Line and the Fryksdal Line is, however, dependent on measures being taken in the national transport system.
- The railroad needs to cut travel times and increase the number of departures.

The development work focuses on the areas where public transport use is still increasing (where there is potential). One ambition within the region is to increase the customer benefit of existing infrastructure, for example by customizing and coordinating transport services to increase the value to customers. Important aspects of this work include:

- Rationalizing the bus service: shorten travel times and increase frequency, thereby improving the connection between different bus lines
- Establishing better train connections to Oslo and Gothenburg
- Improving important transport hubs within the county
- Building a travel hub in Karlstad which integrates changes/transitions between bus, train, car, bike and pedestrian traffic (ongoing work)
- Coordinating timetables
- Improving payment and information systems
- A new ticketing system, introduced in 2012
- A new communication system in the vehicles, installed in 2012

Regional context - Säffle/Värmlandsnäs

'You should be able to commute, travel and send goods quickly' (The Säffle Vision for 2026).

The number of inhabitants in Säffle is decreasing each year. Today, there are about 15,550 people living in an area of 1,220 square kilometres. In Säffle Municipality, Värmlandstrafik has chosen to focus on developing new public transport solutions on the peninsula of Värmlandsnäs (North and South Värmlandsnäs). Today, public transport on Värmlandsnäs has an unclear structure and is more suitable for school transport than commuting to work. The current public transport service has been neglected and does not suit those who wish to travel to Säffle or Värmlandsbro for further commutes (e.g. to Karlstad or Åmål).

A total of 1,755 people live on Värmlandsnäs, out of which 30% (a little more than 550 people) do not have access to public transport (based on living more than two kilometres from the nearest bus stop and the service running frequently enough). Figure 3 shows the areas that have access to public transport on Värmlandsnäs. Each circle has a two-kilometre radius surrounding a bus stop (blue dot on the map).

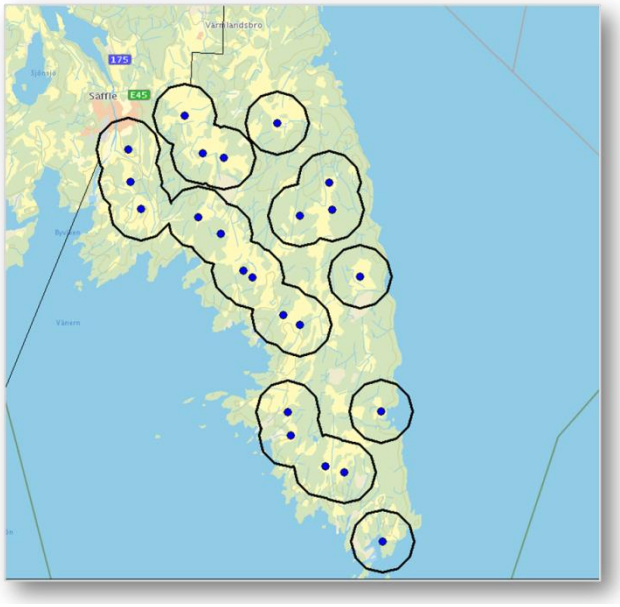


Figure 3: A little more than 550 people living on Värmlandsnäs do not have access to public transport, living outside the circles on the map

Commuting to work

There are 5,005 people who both live and work in Säffle, while 1,523 commute from the area and 1,051 commute to the area (2009, source: SCB). South Värmlandsnäs has 1,110 inhabitants, out of which, roughly 340 commute to work in other areas. Figure 4 below, shows commuting from South Värmlandsnäs. The arrows show the destination of the commuters who work in other areas. The number concerns how many commuters there are for each of the destinations, respectively.

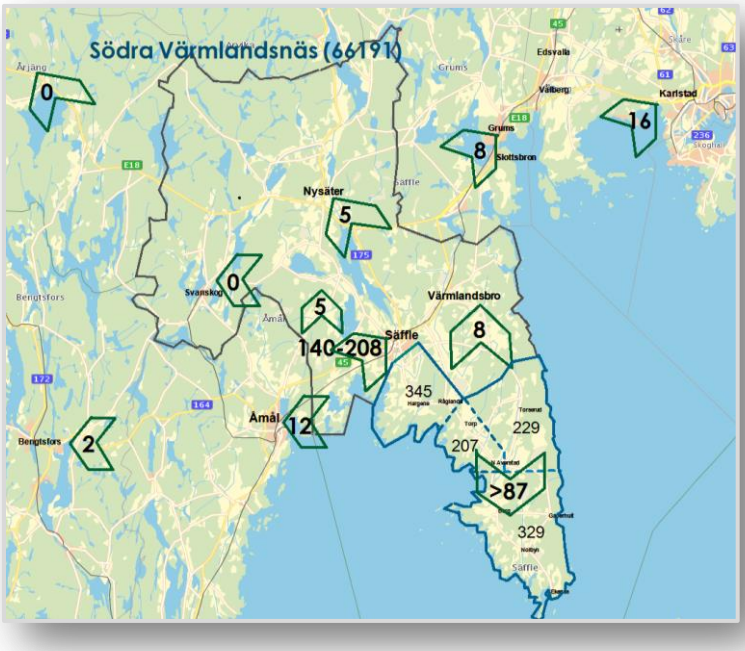


Figure 4: Commuting from South Värmlandsnäs (Source: SCB)

North Värmlandsnäs has 645 inhabitants, out of which roughly 399 commute to work in other areas. Figure 5 shows commuting from North Värmlandsnäs.

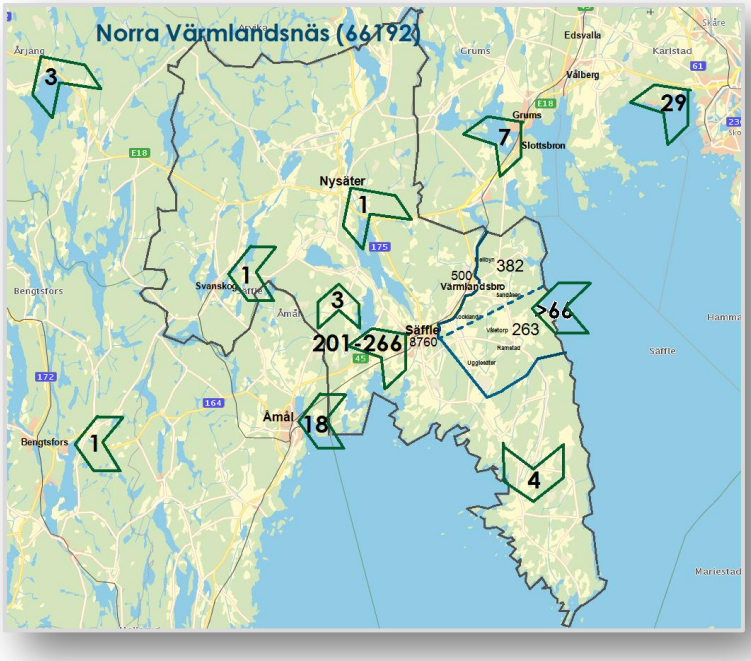


Figure 5: Commuting from North Värmlandsnäs. The arrows show destinations of commuters who work in other areas. The number concerns how many commuters there are for each of the destinations, respectively. (Source: SCB)

Measures for work commuting with public transport

To increase the commuting opportunities available to the people living on Värmlandsnäs, a list of measures has been compiled:

- Co-use already existing vehicles and drivers in the area in order to create new commuting possibilities
- Improve services on two routes: Eskilsäter–Säffle Travel Centre, and Ölserud Church–Värmlandsbro
- Divide the new services into public line services and on-demand services
- Create new services that suit commuting

- Synchronize the routes with train and bus departures to enable further commutes to Karlstad and Åmål

A pilot scheme was run from December 2012 until December 2013, funded by Säffle Municipality. The new, suggested services are shown in Figure 6.

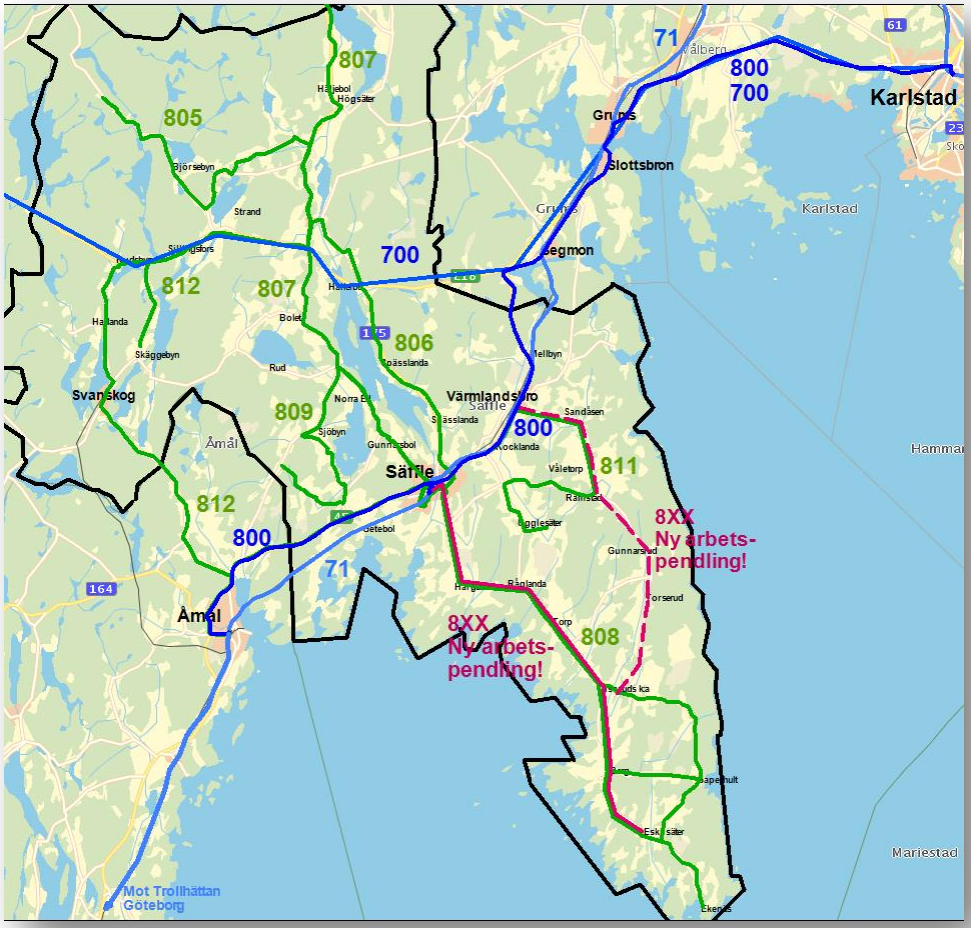


Figure 6: Existing public transport in Säffle Municipality (marked in blue and red), along with the new routes on Värmlandsnäs (marked in pink) to increase commuting

5 Facts and figures

Sources: www.scb.se, www.pts.se, www.trafa.se

Area and travelling distances

Area (square kilometres) (2012)	21,923
- Land	17,591
- Water (inland water, the lake Vänern is not included)	1,797
- Vänern	2,535

Large cities in neighbouring regions with travelling distance	
Karlstad – Oslo (Norway)	230 km
Karlstad – Stockholm	308 km
Karlstad – Gothenburg	248 km
Karlstad – Örebro	112 km

Population – growth, structure, etc.

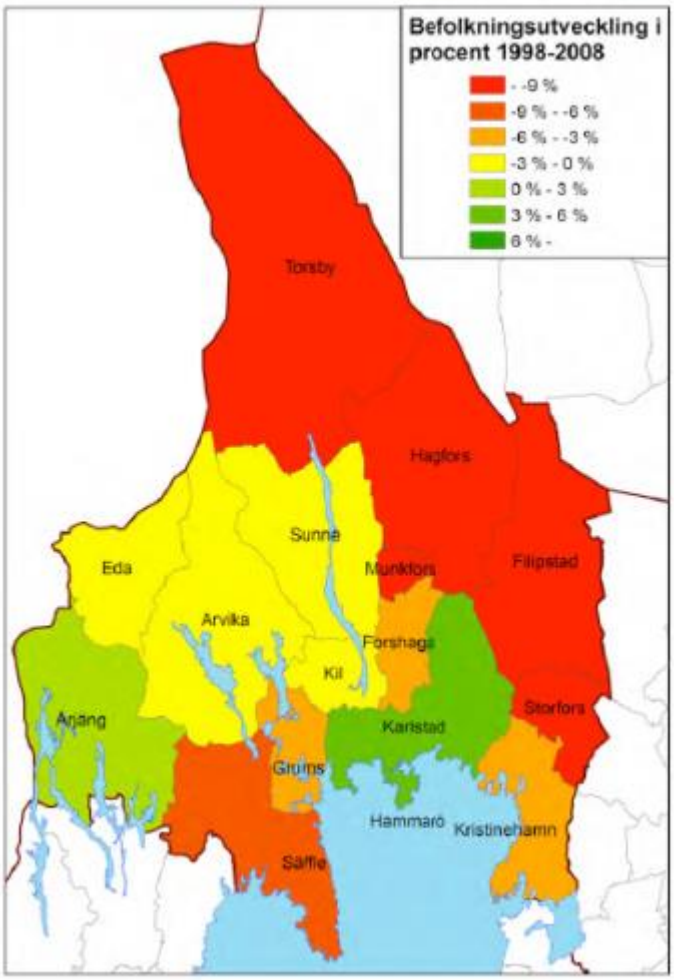
Number of inhabitants (2011)	272,736 (decrease -529)

List of major cities, based on number of inhabitants (2010)	
Karlstad	61,685
Kristinehamn	17,839
Arvika	14,244
Skoghall	13,265
Säffle	8,991

Kil	7,842
Forshaga	6,229
Filipstad	6,022
Skåre	5,402
Hagfors	5,146

Population growth in the municipalities in Värmland

Figur 1. Befolkningsutveckling i länets kommuner under perioden 1998-2008



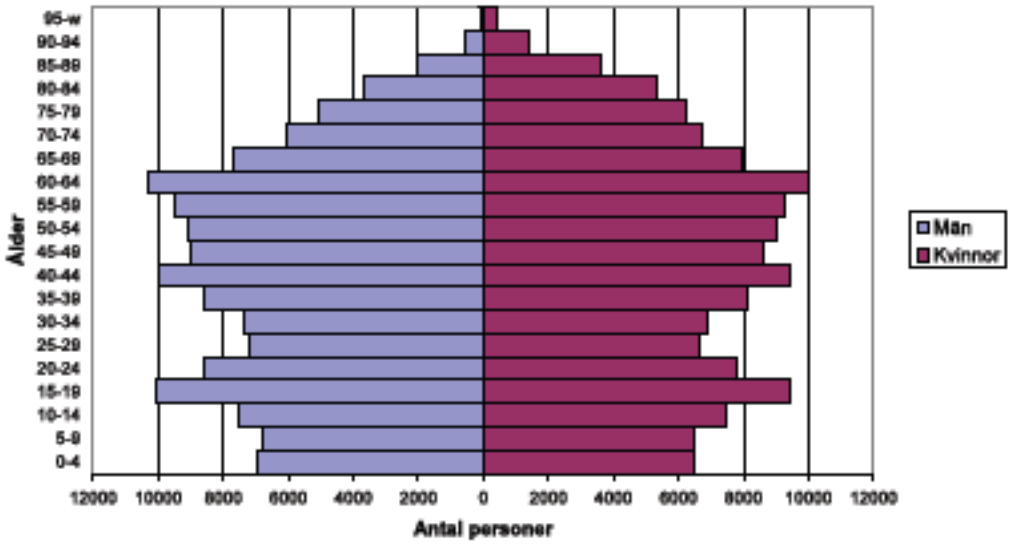
Population demographics (2010)	Värmland	Sweden
Average age (years)	43.5	41.1

Over age 64 in Värmland	
2011	20%
Expected 2030	27%

Population structure in Värmland, 2008

Ålder = age; Antal personer = number of people; Män = men; Kvinnor = women

Diagram 4. Befolkningspyramid för Värmlands län år 2008



Källa: Egen bearbetning av data från SCB.

Education, employment, etc.

Highest level of education, 25–64 years, 2011		
	Värmland	Sweden
Primary school	13%	14%
Secondary school	53%	45%
University, etc.	32%	38%
Graduate	0.5%	1.2%

Economic structure (workplace according to sector), 2011	
Agricultural Värmland/Sweden	38.3/20.4%
Industrial Värmland/Sweden	11.3/13.2%
Services Värmland/Sweden	50.4/66.4%

GDP per capita in Sweden	SEK 369,900 (2011) SEK 361,800 (2008)
GRP (Gross Regional Product) per capita	SEK 284,000 (2008)

Year	Unemployment percentage (age 20–64)	The degree of participation in the workforce percentage (age 20–64)
2000	8.8	72.9
2001	8.6	73.4
2002	8.7	73.5
2003	9.4	73.0
2004	9.3	74.5
2005	8.8	74.3
2006	8.2	75.4
2007	7.6	76.3
2008	6.9	75.5
2009	8.3	72.3
2010	8.6	73.9

ICT adoption etc

ICT adoption in Sweden (2011)	
ICT usage in enterprises (1–9 employees)	
- Use computer	89%
- Internet access	88%
- Uses internet-connected computer	65%
ICT usage in enterprises (10 or more employees)	
- Use computer	97%
- Internet access	96%
- Use internet-connected computer	66%
ICT usage in households	
- Internet access, total	93%
- Internet access, 65–74 years	73%
- Internet access by mobile phone (16–74 years)	31%
- Internet access by mobile phone GPRS (16–74 years)	3%
- Internet access by mobile phone 3G, 3G+, 4G (16–74 years)	26%
- Internet access by notebook outside home/work (16–74 years)	34%

(Source: www.pts.se)

Broadband* access, Sweden**		
	2007	2011
Households and businesses in, or within 353 metres of a property that is connected to a fibre or cable television network	47%	60%
Households and businesses with access to 100 Mbps	-	49%
Households and businesses with no access to broadband	7,100	800

(Source: www.pts.se)

* Broadband is defined as a connection to internet with access to 1 Mbit/s.

** In Sweden people live and work on approximately 6% of the total land area. This means that the broadband survey does not investigate the access to broadband on 94% of Sweden's surface, where households and businesses are lacking.

Broadband access, Värmland, 2011			
	Total	Urban areas	Rural areas
Wire or wireless access	99.98%	100.00%	99.92%
Wire access	96.39%	99.88%	86.98%
Fibre	23.38%	29.96%	5.64%
Cable TV	19.40%	26.35%	0.67%
xDSL	95.87%	99.70%	85.53%
Wireless access	99.97%	100.00%	99.90%
Wireless broadband via HSPA	99.54%	99.99%	98.33%
Wireless broadband via CDMA 2000	99.95%	99.99%	99.82%
Wireless broadband via LTE	21.19%	27.87%	3.15%

Source: www.pts.se

Access to at least ... (actual speed), 2011			
	Total	Urban areas	Rural areas
1 Mbit/s	99.98%	100.00%	99.92%
3 Mbit/s	99.68%	100.00%	98.81%
10 Mbit/s	84.19%	96.36%	51.30%
50 Mbit/s	29.52%	38.14%	6.21%

(Source: www.pts.se)

Price of broadband internet (10.0 MB p/S) connection per month, EUR	
Karlstad	24–36
Kristinehamn	28–43.5

(Source: www.pts.se)

Market situation in public transport, car usage, etc.

Number of trips and mode of travel (in thousands)											
	Private car, driver	Private car, passen-ger	Bus	Metro, tram	Train	Air	Bike	Walk	Other means of travel	Don't know	All
Värmland	185	62	23	0	2	0	37	98	8	2	417

Mean passenger distance for the mail travel by mode (km)											
	Private car, driver	Private car, passeng er	Bus	Metro, tram	Train	Air	Bike	Walk	Other means of travel	Don't know	All
Värmland	29	39	23	0	51	0	5	2	77	0	23

Use car as driver or passenger (in thousands)							
	4–7 days/week	1–3 days/week	1–3 days/month	Less often	Never	Don't know	Total
Värmland	157	68	15	5	2	3	249

Use public transport (bus, metro, tram, train, etc.) (in thousands)							
	4–7 days/week	1–3 days/week	1–3 days/month	Less often	Never	Don't know	Total
Värmland	21	16	29	87	95	2	249

Car usage

Tabell RSK2

Personbilar i trafik efter kommun och ägande m.m. vid slutet av år 2011

Passenger cars in use in counties and by ownership etc at the end of year 2011

Kommun-kod	Kommun	Personbilar i trafik	därav ägda av kvinnor	ägda av män	ägda av juridisk person	därav personliga företag
Municipality		Cars in use (total)	Owned by women	Owned by men	Owned by corporation unin corporated enterprises	Thereof unincorporated enterprises
1715	KIL	6 370	1 834	3 328	1 208	1 000
1730	EDA	5 208	1 573	2 410	1 225	1 122
1737	TORSBY	7 822	2 126	3 192	2 504	2 115
1760	STORFORS	2 418	719	1 366	333	267
1761	HAMMARÖ	7 883	2 319	4 450	1 114	578
1762	MUNKFORS	2 143	676	1 193	274	210
1763	FORSHAGA	5 916	1 791	3 376	749	604
1764	GRUMS	5 052	1 494	2 802	756	642
1765	ÅRJÄNG	6 151	1 573	2 411	2 167	1 907
1766	SUNNE	8 072	2 221	3 149	2 702	2 318
1780	KARLSTAD	40 369	12 086	20 993	7 290	3 927
1781	KRISTINEHAMN	12 042	3 474	6 695	1 873	1 150
1782	FILIPSTAD	5 675	1 648	3 259	768	523
1783	HAGFORS	7 240	2 109	3 825	1 306	1 064
1784	ARVIKA	14 325	4 207	7 042	3 076	2 597
1785	SÄFFLE	8 644	2 402	4 229	2 013	1 695
	Värmlands län	**145 330**	**42 252**	**73 720**	**29 358**	**21 719**