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SWEDEN

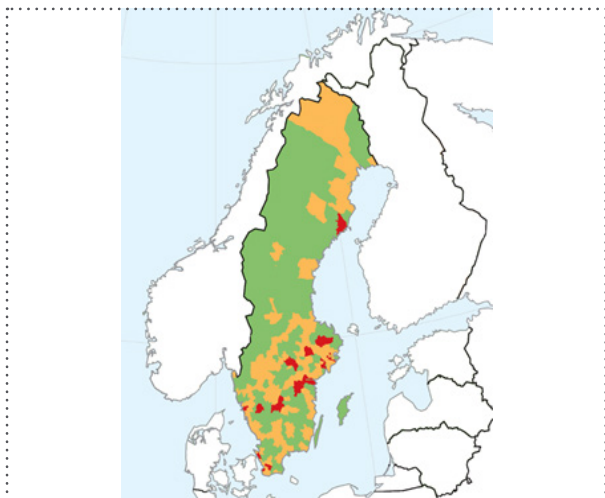
INSIGHT PAPER

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RURALITY (1)

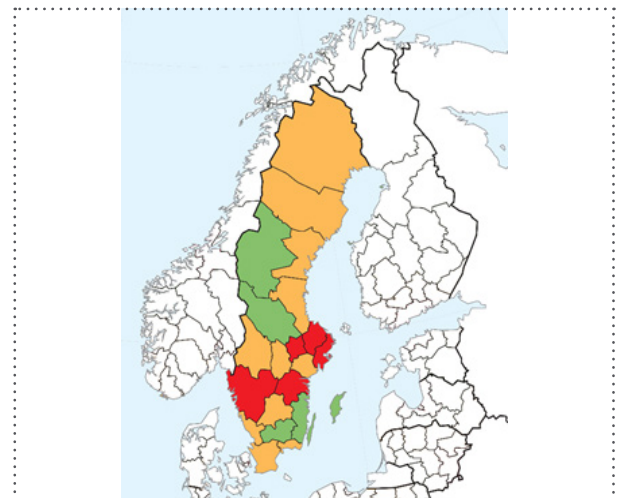
Degree of urbanisation for local administrative units level 2 (LAU2)



- Cities
- Towns and suburbs
- Rural Areas
- Data not available

Source: Eurostat, JRC and European Commission Directorate-General for Regional Policy, May 2016

Urban-rural typology for NUTS level 3 regions



- **Predominantly urban regions**
(rural population is less than 20% of the total population)
- **Intermediate regions**
(rural population is between 20% and 50% of the total population)
- **Predominantly rural regions**
(rural population is 50% or more of the total population)
- **Data not available**

Source: Eurostat, JRC, EFGS, REGIO-GIS, December 2016

DISTRIBUTION OF POPULATION

39.6%

Share of people living in cities

40%

Share of people living in towns and suburbs

20.4%

Share of people living in rural areas

Source: Eurostat, 2016

GEOGRAPHY

Sweden is a Scandinavian country in Northern Europe. It borders Norway to the west and north and Finland to the east, and is connected to Denmark in the southwest by a bridge-tunnel across the Öresund. Figure 1 shows the provinces that constitute Sweden, as well as the major cities.



Figure 1. Map of Sweden with provinces (<http://sweden-map.blogspot.com/2011/10/political-map-of-sweden.html>)

Sweden has a population of 10 million and is the third largest country in the European Union by area at 447,400 km² representing 9.8% of the total EU area. It has the second lowest population density in the EU (24.4 people per km²) and 67% of its land area is covered by woodland. Figure 2 shows a population density map of Sweden. Approximately 85% of the population lives in urban areas, as per a unique Swedish definition where only 200 people constitute an urban system. In contrast, the OECD definition of the smallest urban system is 50,000 people.

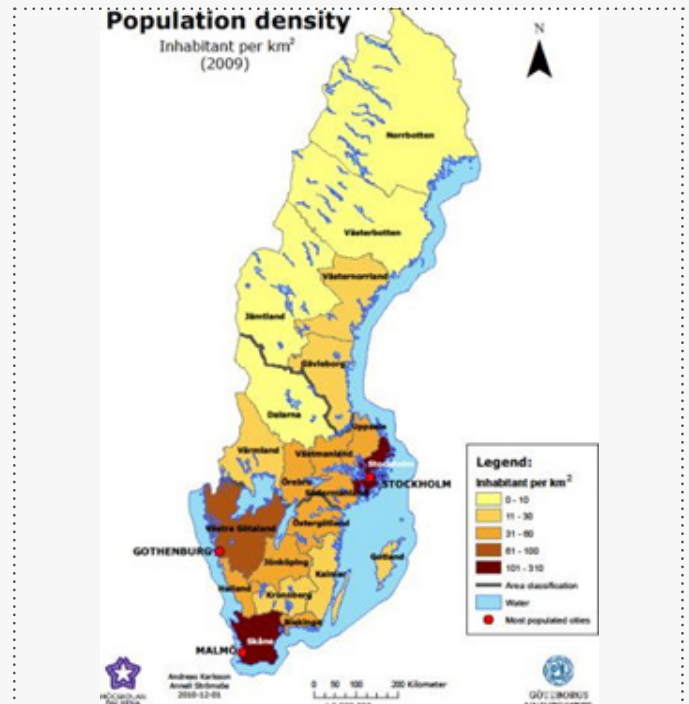


Figure 2. Population density map of Sweden (<https://www.pinterest.co.uk/pin/844776842576040954/>)

According to the OECD definition, only 31 % of Swedes live in urban areas. Hence, Sweden is a very rural country.

The highest population concentration is in the southern half of the country where the climate is milder and there is better connectivity to mainland Europe; population clusters are found all along the Baltic coast in the east; the interior areas of the north remain sparsely populated. For example, Norrbotten and Västerbotten counties constitute a homogenous region of mines and forestry operations, with an ageing and sparse population, tied together by a low quality road system. The region faces real challenges in a number of areas, particularly in terms of how its infrastructure can and should be used to tie population concentrations together to achieve labour market matching, ensure competence supply, and ensure public welfare. These counties have a population concentration on the coast (85% of the counties' populations live in a string of larger

GEOGRAPHY

towns along the coast including both university towns and major industrial cities), while most municipalities are experiencing net population loss. A diminished labour supply relative to the population will also make it more difficult to find suitable competence among new recruits. This problem will be exacerbated by the generally below average level of education in many smaller municipalities compared with that of the country as a whole. The population bases in most of the region's municipalities are small and shrinking. The demographic breakdown in most of the inland municipalities also makes it difficult to recruit labour locally. Young people, particularly young women, are moving out of the region. Little of the population lives inland, spread over what is clearly a large area. As a result, the distances travelled are often great and the commuter flows relatively light. The road system is of deficient quality, with poor traffic safety and reduced speeds. The road system is also crowded with numerous heavy goods lorries, which restrict the mobility of passenger traffic.

In general, Sweden's rural communities are struggling with the effects of long-term population loss to the cities. Cities are growing and developing while rural towns and areas are shrinking and becoming impoverished. Almost half of the country's municipalities have smaller populations compared to three decades ago, and many are now fighting to survive. As many as 33 municipalities have lost at least a fifth of their populations since 1985. One such community is the municipality of Åsele, with a drop of 1,500 people, the equivalent to 35% of its population. In Åsele, in the remote northern Västerbotten region, residents must make 60km round trips just to pick up the mail. The proportion of elderly in rural areas is higher than the proportion of young people, which results in an imbalance in the age distribution.

The private car is the dominant mode of transport in rural areas, public transport instead serving as a supplement or back-up when a car cannot be used.



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The public transport service is meagre, which results in a lack of flexibility and long travel times, and as a rule it is not used for commuting to and from work. The low population density and large distances between the towns make it highly cost-intensive to design services for commuters, and the public transport system is at present configured almost exclusively to meet the demand for travel to and from school. This leads to a heavy dependence on passenger cars, which works counter to equality, traffic-safety, and environmental initiatives. Air travel service to and from the inland areas is generally poor, regardless of destination, limiting the options for weekly commuting. This mainly affects the competence supply in specialised businesses, such as the mining industry (Transport Analysis, 2013).

Public transport in the traditional sense is poorly suited to rural conditions. One challenge lies in finding other, more suitable forms of transport (including taxis) for people who do not have access to a car or are unable or unwilling to drive. Access to local services (e.g., grocery stores) is worse in remote rural areas. To the extent that these services are inaccessible on foot or by bicycle, people are dependent on access by car. However, the major challenge facing remote rural areas mainly concerns interregional access and access to locations with a greater offering of goods and services. Given the shrinking and ageing rural population, simply maintaining the current level of transport system accessibility and quality poses a challenge. Traffic flows are usually small, scarcely justifying large investments,

GEOGRAPHY

and the priority is instead preserving a basic level of access in accordance with the functional objectives of transport policy (Transport Analysis, 2014).

Since 2005 Sweden has been the EU country with the most pronounced urbanisation trend and in 2011 there was a decline in population in as many as 141 of the 290 Swedish municipalities. Population increase is greatest in the major cities of Stockholm, Gothenburg and Malmö. However, it is not only metropolitan areas that are growing. Another important pattern is the emergence of a number of regional growth nodes, such as Umeå, Linköping, Uppsala and Växjö. Frequently, these are seats of higher education, but growth nodes may also be border municipalities such as Strömstad or Haparanda (Government of Sweden, 2013).

Figure 3 illustrates the high degree of variability in terms of accessibility to urban areas across the country. In areas with **very low** accessibility there are no urban areas with 1,000 inhabitants or more. These are very sparsely populated with small urban areas. Areas with **low** accessibility have no urban areas with 3,000 or more inhabitants, so they are also fairly sparsely populated with small urban areas, but not as clearly sparsely populated as the areas with very low accessibility. Areas with **average** accessibility contain urban areas with between 3,000–30,000 inhabitants. Areas with **high** accessibility contain relatively large urban areas (30,000–60,000 inhabitants), but also surrounding rural areas. In the areas with **very high** accessibility lie the largest cities in Sweden (over 60,000 inhabitants). Close to 55% of the population lives in areas with very high accessibility, which have a rather limited surface area, but contain the large cities of Sweden.

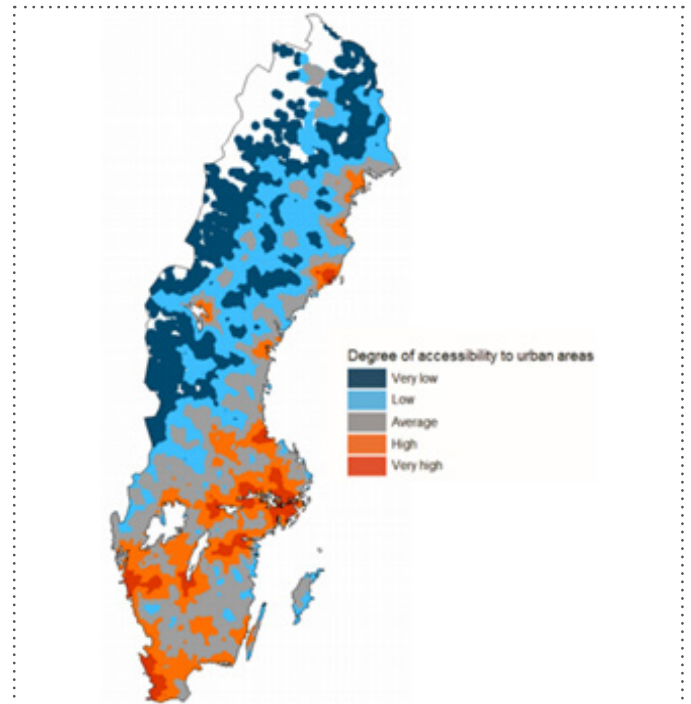


Figure 3. Degree of accessibility to urban areas in Sweden in 2010 (Source: Transport Analysis - 2014)

Just over 30% of the population in Sweden lives in areas with high accessibility, which encompasses areas close to the large cities. Almost 13% of the population is found in areas with average accessibility, comprised mostly of rural areas with smaller urban areas, primarily in southern Sweden. 2% and 0.5% respectively of the population live in the peripheral and sparsely populated areas, with low and very low accessibility. These areas take up a very large part of the country, but contain a small proportion of the population, while the geographically relatively limited areas with very high accessibility contain more than half the population (Swedish Agency for Growth Policy Analysis, 2010).

RURILITY (2)

20.6%

Share of people at risk of poverty or social exclusion in rural areas, 2017

0.7%

Share of people aged 16 and over who reported unmet needs for health care in the previous 12 months due to expense, distance to travel or length of waiting list in rural areas, 2017

6.2%

Unemployment rate, persons aged 15–64, in rural areas, 2017

9.4%

Share of young people aged 18–24 neither in employment nor in education or training (NEETs) in rural areas, 2017

Source: Eurostat

NATIONAL POLICIES RELATING TO RURAL MOBILITY AND PUBLIC TRANSPORT

The Swedish Government has set the following objectives for transport and infrastructure: The overarching goal for transport is to ensure the economic efficiency and long-term sustainability of transport provision for citizens and enterprise throughout Sweden. In addition, the Riksdag has adopted a functional goal – accessibility – and a consideration goal – safety, environment and health.

Functional goal – accessibility: The design, function and utilisation of the transport system are to provide companies and people with a basic level of accessibility of good quality and usability, and to contribute to the development potential of the entire country. The transport system is also to be gender equal, i.e. to meet the transport needs of women and men in an equivalent manner.

for commuting, visiting and increased employment. An effective transport system is necessary if companies are to be able to operate throughout Sweden.

There is no specific mention of rural transport policy priorities in these objectives.

The Government does have a set of objectives for rural affairs. The overall objective is for Sweden to have the lowest national unemployment in the EU in 2020. Such an objective is dependent on viable and living rural areas. The Government wants to make use of the opportunities of rural areas and combine environmentally sustainable development with economic growth that provides the conditions to create increased employment and belief in the future throughout Sweden.



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Consideration goal – safety, environment and health: The design, function and utilisation of the transport system are to be adapted in such a way that no one is killed or seriously injured in traffic. The design of the transport system is also to help to achieve the overarching generational goal for the environment and the environmental quality objectives, and to contribute to improved health.

Transport also contributes to wider government objectives: The Government's goal is for Sweden to have the EU's lowest unemployment rate in 2020, at the same time as the employment rate increases. A robust and efficient transport system with a good capacity is a prerequisite for jobs and sustainable development throughout Sweden. Infrastructure ties the country together and is a key prerequisite for a growing economy, increased population, improved opportunities

A set of detailed objectives are then listed in relation to animal welfare, fisheries, conservation, agriculture, rural development, forestry and food. However, there is no explicit reference to accessibility, mobility or the role of transport in relation to these objectives.

It has been recognized that a trans-sectoral approach is needed that includes initiatives going beyond transport policy to address primarily the most remote rural areas. This could involve various types of municipal services or an ombudsperson function tied to a rural grocery store. For example, it may be more cost-effective, primarily in the most remote rural areas, to support a rural store rather than trying to improve access by improving the transport infrastructure. IT is an important tool in providing transport access in sparsely populated parts of the country. Broadband access is naturally a prerequisite for the ability to use various IT services.

INSTITUTIONAL FRAMEWORK

At national level transport falls under the portfolio of the Ministry of Enterprise and Innovation which is responsible for the business sector, housing and transport, ICT, regional growth and rural affairs. Within the Ministry, the Minister for Transport and Infrastructure is responsible for the provision of economically efficient, sustainable transport services for the general public and businesses throughout the country. This includes railways, roads, shipping and aviation, as well as transport and infrastructure research.

Each ministry is responsible for a number of government agencies tasked with applying the laws and carrying out the activities decided on by the Riksdag and the Government. The Swedish Transport Agency is responsible for most regulation and supervision in the transport sector, and for deciding on permit applications and maintaining records. The Agency has overall responsibility for producing regulations and ensuring compliance.

The Swedish Maritime Administration is responsible for safety and navigability at sea, as well as for building, operating and maintaining navigation infrastructure. LFV is responsible for civilian and military air traffic control in Sweden, as well as for safety and development of Swedish air space. Transport Analysis is a government agency charged with providing decision-makers in the sphere of transport policy with policy advice by reviewing, analysing, following up and evaluating proposed and implemented measures at the request of the Government. Transport Analysis is also responsible for the production of official statistics in the transport and communication sectors, including travel surveys and commodity flow surveys. Some summary reports of research undertaken by the Transport Analysis agency are available in English and have been engaged in this paper, however, full reports are only available in Swedish.



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Its activities encompass all modes of transport, i.e. roads, railways, aviation and shipping. In addition, it administers motor vehicle tax, congestion charges and the super green car rebate.

The Swedish Transport Administration is responsible for long-term planning of the transport system for all types of traffic, as well as for building, operating and maintaining public roads and railways. The Swedish Transport Administration is also responsible for administering the theoretical and driving tests needed to receive a driving license and taxi driver badge, as well as the theoretical test for the professional know-how needed for a transport license and certificate of professional competence.

REGULATORY FRAMEWORK

In Sweden there are three levels of government: local, regional and national. Local municipalities have historically been strong and independent, and they retain very strong control of land use planning (making plans and granting planning permission). They run most local public services. Regional government runs the health service, public transport and has some limited economic development functions; in some regions, the regional government also tries to steer/influence local land use planning, but it has no statutory power to do so. National government owns the national road and rail network and sets the regulatory framework for transport, and part funds large transport investments. Subsidy for local and regional public transport is funded from local and regional income tax. There has been a trend in recent years for a greater proportion of this subsidy to be passed from the local to the regional level as the benefits of planning and delivering public transport at the regional level have become clearer.

In most regions there is a politically controlled body, the PTA, that sets the policy direction for local and regional public transport. It is a sub-body of the elected regional council and one politician in the government of the regional council gives it day to day direction, although major decisions are taken by the whole regional council. In most regions this body then owns a public sector company that is responsible for the planning and franchising of urban and regional public transport, timetable and service planning, ticketing, and longer term planning of investments and improved services. In some regions, some large municipalities retain control of the specification of their local public service. They pass less of their local income tax revenue up to the regional level and instead pay it directly to the public sector company mentioned above, which then delivers the local public transport services in the city. Alternatively, the municipality may own its own arm's length company that plays this role, and an equivalent but separate regional public transport organisation plans and procures regional services (Urban Transport Group, 2017).

Law on the regulation of public transport is made at the national level and the most recent new legislation was Prop. 2009/10:200, which was enacted in 2012. In its Green Paper stages, the proposal was that the new law should bring in full deregulation of at least local and regional bus services. This was due to dissatisfaction in some quarters about a lack of "customer focus" in the Swedish public transport market.

In the event, the new law left the broad specification of local and regional public transport to the public sector through a basic structure of franchised services; private operators do however have the option to register a deregulated service, should they identify a gap in the publicly-provided network. There is no obligation on the public sector operation to permit such private operations to join any regional integrated ticketing scheme. In addition, the new law placed new emphasis on the strategic level, as the regional public transport authority now has to produce a regular Regional Transport Supply Plan (RTSP). The RTSP was to be developed by the new legal organisation: the Regional Public Transport Authority [RKM-Regional KollektivTrafikMyndighet], the political organisation that (in most regions) owns the arm's length body that does the contracting and planning of public transport services.

ORGANIZATIONAL FRAMEWORK

Urban and regional bus transport in Sweden is provided by private operators running services under contract to Passenger Transport Authorities (or their subsidiaries). In the largest cities such as Malmö or Gothenburg, there is a dense network of urban public transport services. In smaller cities buses run every 8-10 minutes on key routes during daytime, falling to half hourly at night, and the length of the service day is similar to that in large cities. Small towns such as Ystad have a local bus network of 3-5 routes operating half hourly. During morning and evening peak hours Monday to Friday service frequencies on regional buses are significantly enhanced to up to double the daytime off-peak frequency. Urban buses always run via the main and other railway stations and low frequency urban and regional bus services are timetabled to connect with trains. Regional buses on low frequency routes offer timetabled connections between services. In some regions a system of demand responsive transport, requiring a minimum pre-booking time of 2 hours, is available outside areas with regular scheduled services to certain destinations, but at the same single fare.

Sweden has a highly evolved rail network, which is the 21st longest in the world at about 13 000km. The main operator is SJ AB, a state owned rail operator. In 1988, prompted by SJ's large deficits, the Swedish parliament privatised the network by ordering that the ownership of rail infrastructure be separated from the ownership of train operations, and opened up the system to private sector train operators by introducing competitive tendering for local rail service contracts. Private rail operators include Arlanda Express, Arriva, Veolia, DSB First and JLT. While most current railway lines of Sweden were determined and built by the state, and receive their technical upkeep from the public as well, SJ no longer holds a monopoly on operating and owning passenger trains where such can be run profitably on a commercial basis. Large parts of the rail network serve parts of the country which do not generate enough passenger or cargo traffic to make a profit. For regional trains (within a county or up to about 100 km distance) the counties will buy traffic, signing a contract with an operator. The operator is often SJ, but sometimes another operator, either Swedish or from one of the other EU countries, provides the service. For these regional trains the county transport authority sells tickets. For long-distance trains (i.e. longer than the regional trains) that are not profitable, a national authority "Rikstrafiken" signs a contract with an operator to move traffic on each line (Public Service Obligation).

In this case each operator markets and sell tickets. The operator for unprofitable services usually rents trains from the county transport authority or a special state organisation. This is because trains are expensive, take from two to three years to buy (from tender to delivery), and are hard to sell if the operator loses the contract. Sweden has rail links to neighbouring countries of Denmark, Finland, Norway, Germany and Poland (it is ferry trains with some of these countries).

With regard to targeted mobility services, the potential exists for improved coordination among various forms of socially funded travel, such as regular scheduled transport services, school bus services, mobility services, and travel services to access medical services. Although this has been discussed for many years, several problems remain in coordinating these services. One problem stems from the lack of a single system that handles all types of transport, with the result that each is planned separately. Another problem is that different types of transport are subject to different laws. Consolidating responsibilities and more coherent regulation of public transport and special passenger transport services could be ways of improving coordination and increasing the accessibility and efficiency of public transport. Shifting the responsibility for special passenger transport services to the regional level would also incorporate them into the regional transport service programmes, which would then include school bus services and medical travel services as well.

FINANCIAL FRAMEWORK

The Swedish government has outlined its transport investment priorities in the National Plan for Infrastructure 2018-2029.

The plan provides for a total investment of SEK 700 billion and the largest railway investment in modern times. The plan covers major investments in both new construction and restoration and modernisation of existing infrastructure. The decision also covers significant investments in maritime transport infrastructure and roads. In total, SEK 622.5 billion will be invested as follows:

- SEK 125 billion for operation and maintenance of state-owned railways
- SEK 164 billion for operation and maintenance of state-owned roads
- SEK 333.5 billion for the development of the transport system

For selected investments, i.e. those objects that cost more than SEK 100 million, approximately SEK 193 billion will be distributed during the plan period.

- Investment will be increased in double-track expansion along the East Coast Line between Gävle and Kringlan by SEK 1.7 billion compared with the proposal from the Swedish Transport Administration.
- Investment will be increased in measures for long freight trains by SEK 393 million compared to the proposal from the Swedish Transport Administration.

The Government is multiplying the investments in fairways and locks compared to the preceding plan. The Government is now allocating funds for the important deepening of the fairways at the Port of Gothenburg.

This investment, together with the other shipping measures in the plan – completion of the ongoing work on the locks at Södertälje and the fairways in Mälaren, modernisation of the locks in Trollhättan and improved fairways to Luleå and between Landsort and Södertälje, to name the largest – will reduce transport costs, increase maritime safety and reduce emissions as they promote the transfer of goods transport from roads to railways and shipping.



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The selected railway investment objects amount to a total of SEK 148 billion, 77% of total funds for the selected objects. The plan contains major investments to develop the railway system and increase capacity:

- the North Bothnia Line between Umeå and Skellefteå is to begin during the plan period,
- the South-East Link between Älmhult and the Blekinge coastal line, west of Karlshamn, will also be expanded and modernised.

Examples of major investments to improve safety on the national road network include separated oncoming traffic lanes on most of the remaining stretches of the E4 between Hudiksvall and Luleå, on the E20 between Örebro and Gothenburg, and on several sections of the E10 in Norrbotten.

The appropriation for operation and maintenance of railways will increase by 47% compared with the previous plan, which will have a major effect on the status of current rail infrastructure.

FINANCIAL FRAMEWORK

Among the largest reinvestments in railways, to mention a few Sävsnäs railway yard in Gothenburg, the Getingmidjan in central Stockholm and measures on the Värmland Line between Laxå and Kil and the Viskadal Line between Borås and Varberg.

The Government has increased the appropriation for road maintenance in the coming plan and has already carried out targeted investments in road maintenance in rural areas. Continued operational grants for private roads will be a further important measure to also enable the maintenance of less used road networks.

across the Skuru bridges in Nacka and the bridges across the Kalix river at Kalix.

Under the national plan, funding is allocated to the regional transport plans drawn up by county planning bodies (e.g., county administrative boards and regional offices).

The major challenges in terms of maintaining current standards and access are found in remote and extremely remote rural areas. In such areas, the priority is maintaining basic access in accordance with the



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To also secure and improve roads for heavy vehicles, the appropriation for load-bearing capacity and frost protection will increase. Measures will be initiated to enable the opening of a road network with class 4 load-bearing capacity. In this way, we are strengthening the business sector, securing jobs and increasing Sweden's competitiveness.

Among the major reinvestments and maintenance measures on the state-owned road network, to mention measures on bridges, including route 137 across the Öland bridge, E6.20 across the Tjörn bridge, route 222

functional objectives of our transport policy. For example, the government can set priorities, via its planning directives, specific infrastructure and other measures that benefit rural areas. In addition to normal planning activities, the government has several important tools with which to address transportation in rural areas. These include two forms of state operating grants for airports: grants given to those airports for which the state procures traffic, and grants distributed according to the county plans, the county planning bodies determining which airports receive the grants.

OTHER INFORMATION

Drive Sweden (www.drivesweden.net/en) is one of seventeen Strategic Innovation Programmes (SIPs), a new instrument for addressing complex areas with huge potential to come up with sustainable solutions to societal challenges through stakeholder cooperation, funded by VINNOVA, the Swedish Innovation Agency.

Drive Sweden was launched in 2015 by the Swedish government to address opportunities and challenges with the next generation mobility system for people and goods and promote new mobility models in the domain of MaaS. The programme has invested in a number of projects in urban areas, but the vision is for nationwide MaaS operations to begin by 2026.

KEY STAKEHOLDERS AND MINISTRIES ADDRESSING RURAL AREAS

TITLE	ROLE
Swedish Government: Transport and Infrastructure	Responsible for the provision of economically efficient, sustainable transport services for the general public and businesses throughout the country, including railways, roads, shipping and aviation, as well as transport and infrastructure research.
Swedish Transport Administration	Responsible for long-term planning of the transport system for all types of traffic, as well as for building, operating and maintaining public roads and railways. Also responsible for driver licensing
Swedish Transport Agency	Responsible for most regulation and supervision in the transport sector, and for deciding on permit applications and maintaining records.
Swedish Transport Analysis agency	Provides decision-makers in the sphere of transport policy with policy advice. Also responsible for the production of official statistics in the transport and communication sectors, including travel surveys and commodity flow surveys.

LINKS TO WEBSITES

- www.government.se/government-policy/transport-and-infrastructure
- www.trafikverket.se/en/startpage
- www.transportstyrelsen.se/en/road
- www.trafa.se/en

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