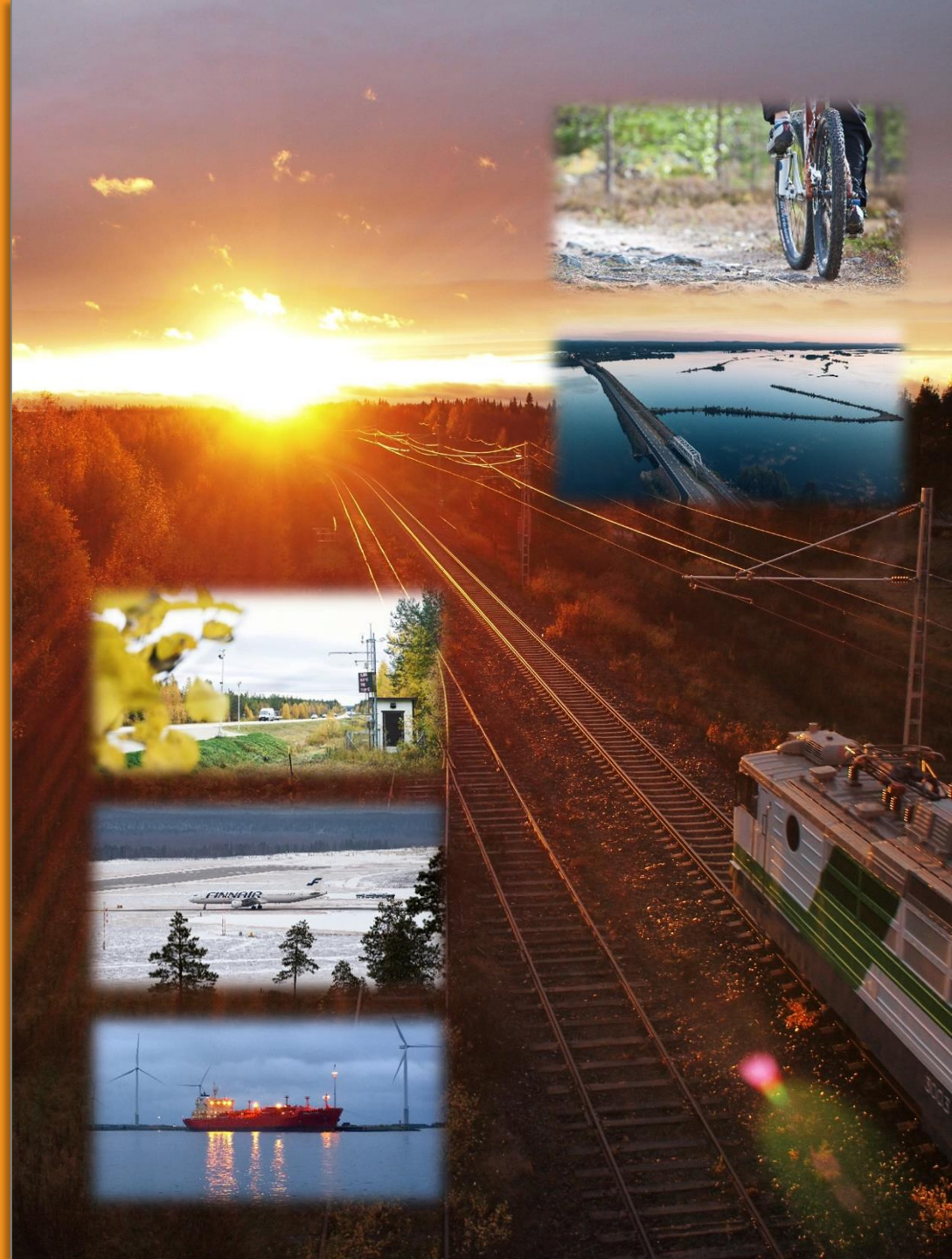


The transport system plan for Lapland 2040

26 April 2021

Lapin
LJS 2040



National and regional targets and strategies have a strong impact on planning

National starting points

- Act on the transport system and highways
- National transport system plan
- National land use objectives
- Current national projects or studies: e.g. roadmap for fossil-free transport, the work of the working group studying the reform of transport taxation, the national traffic safety strategy, reform of the Land Use and Building Act, and the development plans for the main railway line.

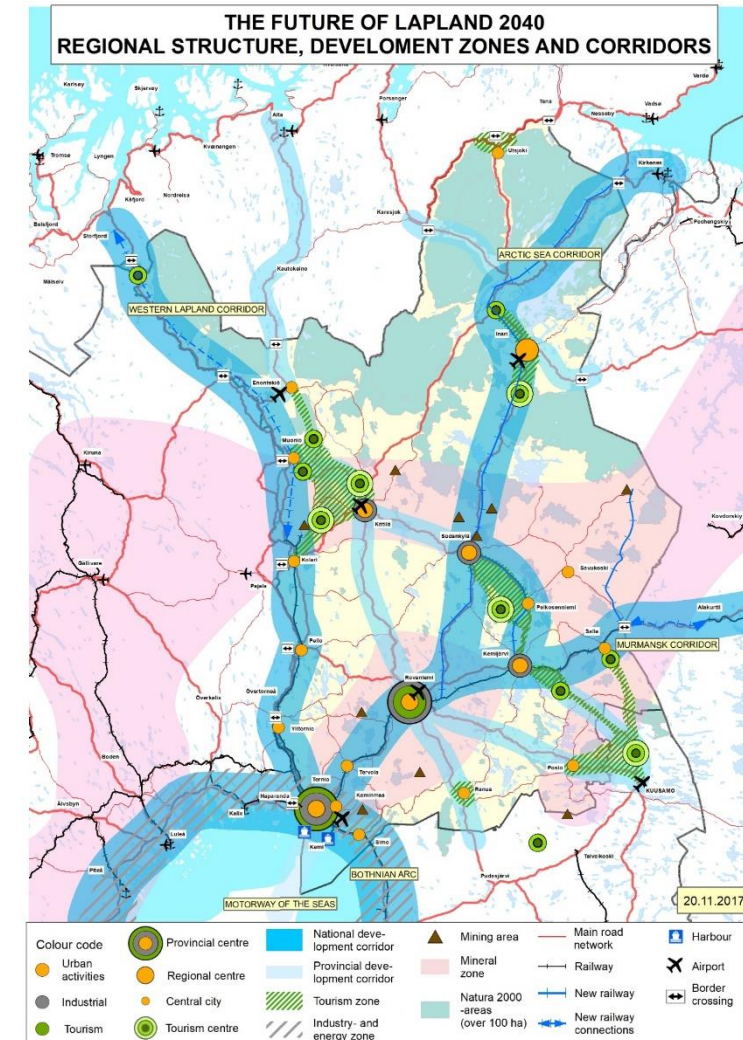
Regional starting points

- Vision for the future of Lapland 2040 acts as a basis for the transport system plan. The Lapland accessibility coordination project also presented a view of the target state of Lapland's transport connections for 2040.
- The Lapland Agreement with cross-cutting themes of, e.g. internationality, low-carbon, sustainable development, digitalisation, and equality.
- The transport and logistics strategy for Northern Finland, the previous transport system plan for Lapland, and regional transport system plans and transport studies
- Effective regional land use plans
- Lapland tourism strategy and the Visit Arctic Europe project

-  Sustainability
-  Accessibility
-  Efficiency
-  Functioning
-  Safety

↑ Figure 1. National targets for the transport system.
Icon source: National transport system plan

→ Figure 2. Regional structure of the vision for the future of Lapland 2040 and the development zones and corridors. Figure source: Lapland Agreement 2018–2021.



Change factors in the operating environment direct future development trends

- The development of the Arctic region and the Northern Sea Route is directly linked to Lapland's development
- Sámi people and the Sámi culture are a special characteristic of the Lapland region
- The population has decreased and concentrated in the 2000s
- Lapland's economy is characterised by tourism and industry. Business development outlook in Lapland is fairly positive:
 - Tourism was growing strongly before the coronavirus pandemic
 - Forestry and forest-based industries and the bioeconomy sector have investment plans
 - Metal industry is strong, investing in circular economy
 - Mining industry is expanding
 - Bioenergy production plants are under plan
 - Lapland has growing activities, e.g. in innovation environments, service design and Arctic Smartness.
 - Lapland has several vehicle and tyre testing areas. The sector is international and growing.

FACTORS HAVING AN IMPACT ON THE COMPETITION ENVIRONMENT OF THE FUTURE

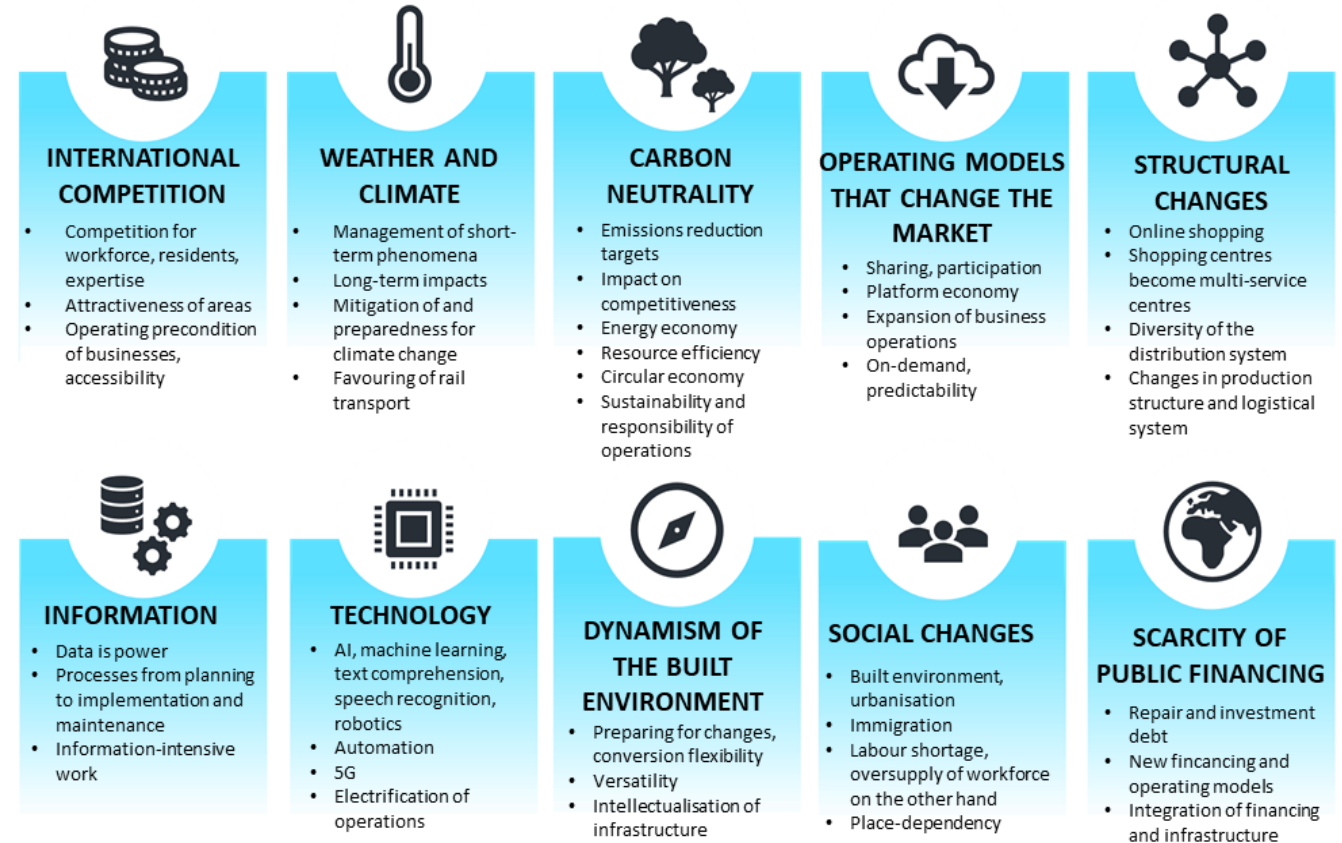


Figure 3. Global megatrends also have an impact on Lapland. Image source: WSP

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Vision and strategic development targets for the transport plan for Lapland 2040 including their indicators

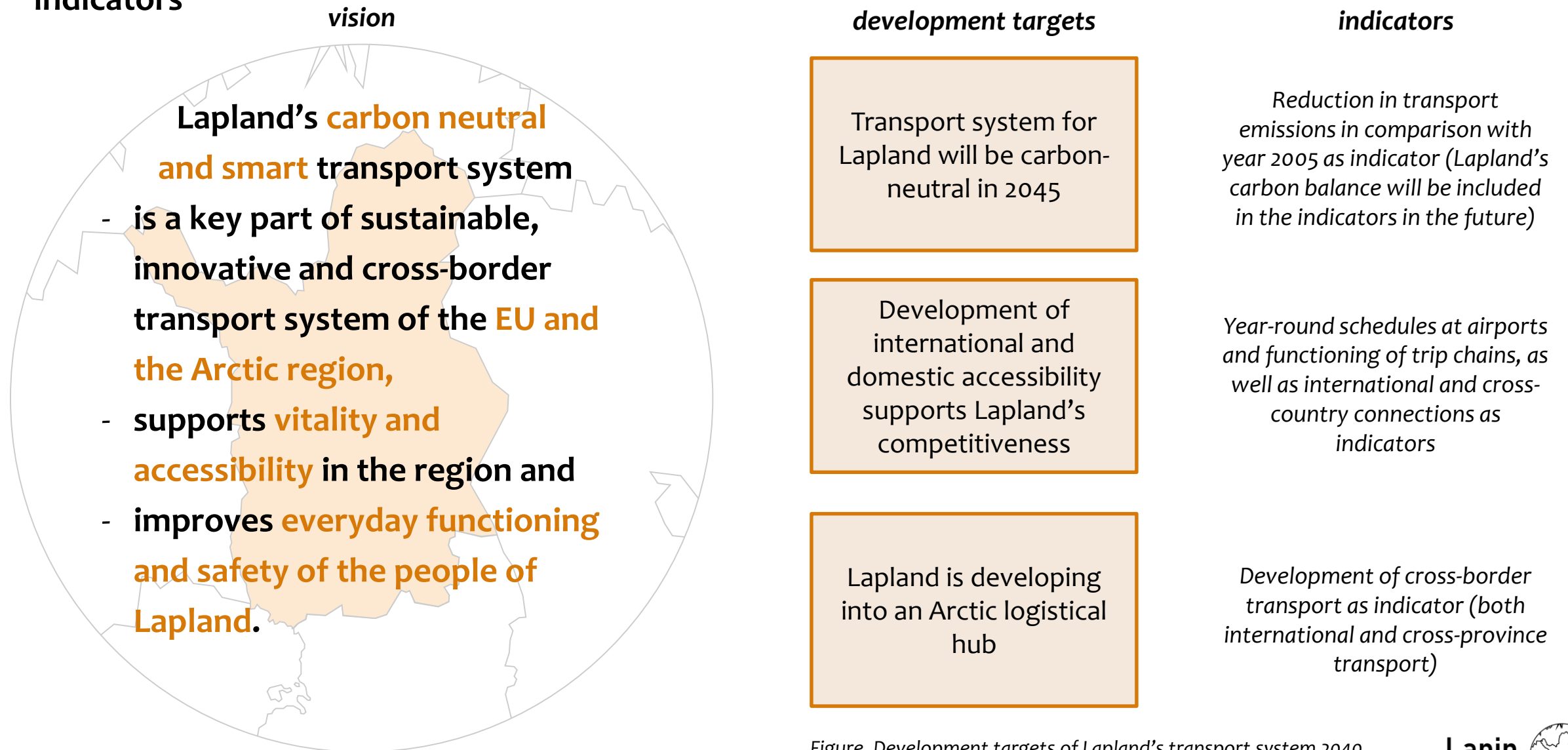


Figure. Vision of Lapland's transport system 2040

Figure. Development targets of Lapland's transport system 2040 including their indicators

Development strategy by type of region

Regional centres:

- Land use defines transport needs and the possibility of using different modes of transport
- Fluency of trip chains as a development area
- Promotion of sustainable mobility as a strong part of everyday work
- Public transport as part of sustainable mobility
- New mobility services must be enabled by utilising digitalisation
- Distribution networks of new driving powers must be developed
- Traffic safety as a precondition
- Needs of goods transport and logistics into account in the development of towns
- Coordination into the development of digital infrastructure

Rural areas:

- Possible infrastructure bottlenecks must be identified and allocation of funding must be constantly prioritised
- Digital infrastructure must be developed
- Public transport and smart trip chains are important
- Cooperation models for goods transport must be developed

Regional and other centres:

- Land use is important also in other centres
- Sustainable mobility must be promoted by identifying special characteristics of the centres
- Work and study possibilities are emphasised in public transport
- Passenger car traffic has an important role also in future, but attention must be paid to the reduction of emissions
- Goods transport and logistics into account in the development of centres

Development corridors

- Linking with cross-border transport and the European transport network is important
- Service level of transport infrastructure must be developed in the long term, emphasising the need to reduce emissions from transport
- Automation of transport must be prepared for
- Trip chains relying on trunk services must be streamlined by utilising demand created by tourism
- Increasing the efficiency of goods transport and logistics is one of the key needs

Tourism centres:

- Sustainable mobility to be taken into account in the development of land use and transport infrastructure
- The efficiency of trip chains of tourists, information and mobility services must be developed
- Cross-country road links are important to tourism
- Goods transport and logistics must be taken into account
- Digital infrastructure must be developed

External accessibility:

- Accessibility must be developed as a whole
- Efforts should be made to develop Lapland into an innovative Arctic logistical hub
- Development of international accessibility is a clear characteristic of Lapland

Key development strategies divided according to the three themes

Mobility

Efficient, smart and low-emission trip chains combining all modes of transport for the needs of local residents and tourists – hubs, guidance for mobility, ticket and information systems

Increasing the share of sustainable mobility (walking, cycling and public transport) in urban areas and in the whole region, connection to land use and service network planning

Possibilities provided by new mobility services, new driving powers and their distribution networks, new modes of transport

Development of rail transport and improving the service level as a sustainable mode of transport

Development of scheduled airline services to all airports in Lapland and onwards to various destinations

Improvement of traffic safety

Taking the growth in transport as a result of tourism into account in investments and road management

Increasing opportunities for remote working

Transportation

Cost- and energy-efficient smart transport system using and integrating the road, rail, sea and air transport system – infrastructure investments support the trend

Locations and efficiency of logistical hubs in relation to industrial delivery chains and community structures, and the development of operating preconditions of distribution transport, also rest areas for heavy goods transport

Condition of the road network from the minor to the main road network, enabling full utilisation of higher scales and masses, also the management and upkeep of the road network

Ensuring and developing the operating preconditions of special goods transport in order to operate growing project transports

Coordination of the growth in heavy transport from business and new industrial investments and tourist-related traffic in the same network, also taking into account the increasing volumes of goods transport in tourism centres

Development of cross-country connections to be better operated by heavy transport

Cross-border accessibility

Links to transport system plans for nearby areas and to transport and logistics strategies. Transport network in the Barents Region and the development of related corridors

Promotion of cross-border tourism concepts and smart trip chains with all modes of transport

Improving the efficiency of cross-border smart transport chains to also support cross-border industrial processing chains.

Significance of cross-country links, Finland's road network as part of the transport systems of neighbouring countries, connecting the transport network to the neighbouring countries' transport network

Development of the infrastructure of ports and the related transport chains, and ensuring competitiveness with sufficient depth of maritime shipping lanes, digitalisation of ports

TEN-T, the Arctic Corridor, the Barents – linking the development also to the promotion of larger areas of examination

Differences in emphasis in various types of regions and aspects of examination:

- Urban areas
- Regional and other centres
- Tourism centres
- Rural areas
- Development corridors
- External accessibility

Infrastructure that supports development and its utilisation and promotion:

- LNG
- Distribution networks of different driving powers in transport
- Information networks and localisation
- Cable and data centres of the Northern Sea Route

Towards a carbon-neutral traffic and transport system with various measures and frequencies: current state, 2032 (VLJS) and 2040

Development of digital infrastructure to cover the entire region of Lapland with a good level of service

Spearhead projects to be promoted at the national level

Improvement of Finnish national road 4 between Keminmaa and Inari

National road 4 is the most important main artery in Lapland, carrying the majority of transport in Lapland. The road must be improved in stages according to funding and resources. The fluency and safety of traffic in the road connection will improve as the key impacts. Security of business transport and predictability of journey times will improve and the noise and environmental impacts of transport will be reduced.

Improvement of national road 21 between Tornio and Kilpisjärvi

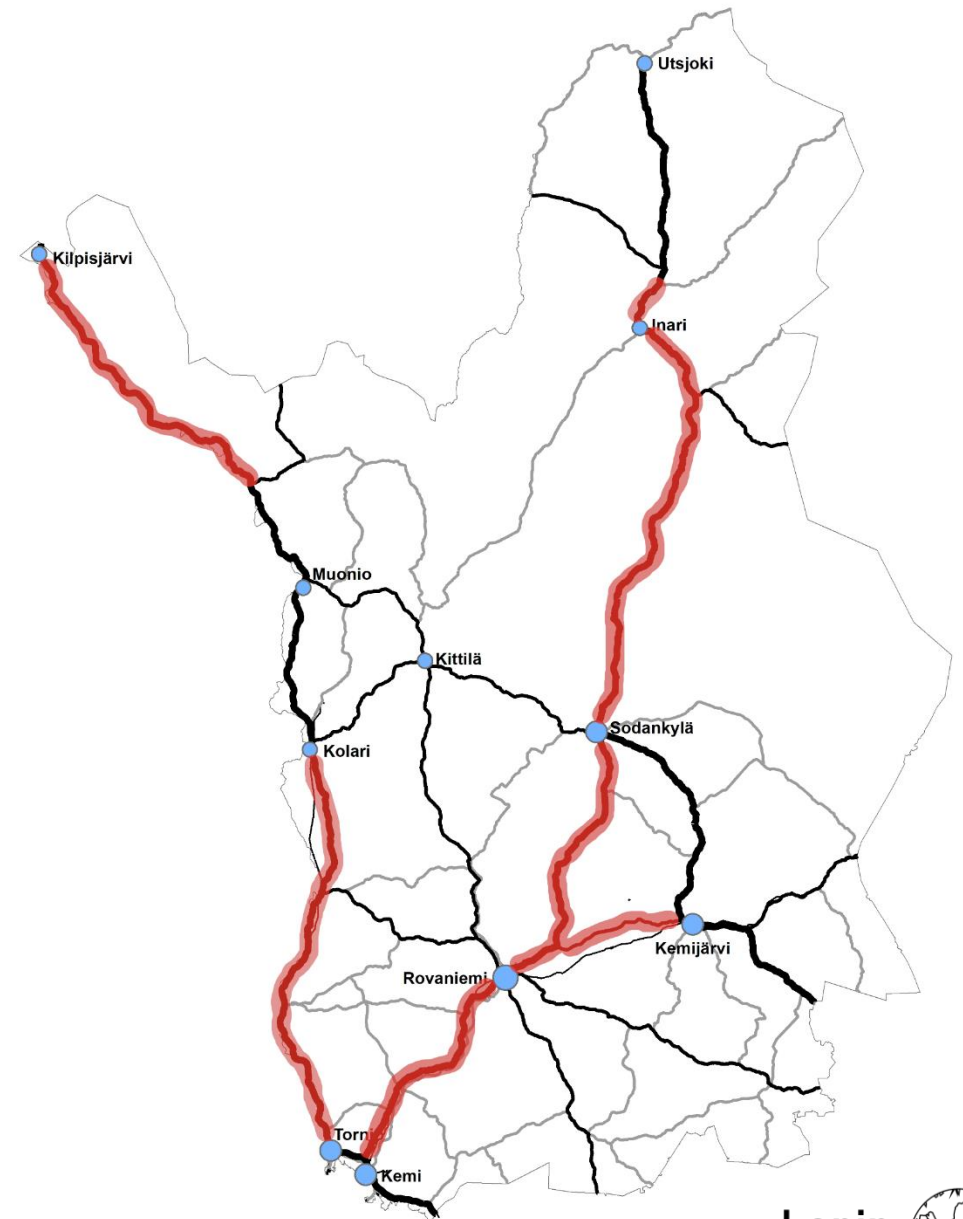
National road 21 is an important artery for growing international north-south goods transportation on the western border of Finland. Currently the road is narrow and in poor condition especially in its northern section, causing a number of heavy goods vehicles driving off the road. The road must be improved in stages according to funding and resources. The fluency and safety of traffic in the road connection will improve as the key impacts. Security of business transport and predictability of journey times will improve.

Improvement of main road 82 between Vikajärvi and Kemijärvi

Main road 82 is currently a poor road connection in terms of its condition and geometry. As a result of improvement, the fluency and safety of traffic will improve in the road connection. Operation of raw material transports and the structural strength of the road will be safeguarded.

Development of digital infrastructure, fast communication links

The project improves and develops Lapland's digital infrastructure to safeguard functioning and efficient communication links throughout the region. As the key impacts, the possibilities of remote work and preconditions for living in rural areas will improve. Automation of transport will become possible in key thoroughfares.



Other regionally important infrastructure projects

- **Projects related to the integration of land use and transport:** improvement of main road 78 between Jätkänkynttilä and Pöykkölä, new bridge connection in Paavalniemi in Rovaniemi, and the improvement of national road 29 by Tornio town centre
- **Infrastructure projects for promoting sustainable mobility:** improvement of planning preparedness, implementation of Rovaniemi tourism centre
- **Cross-country transport connections:** improvement of national road 5 between the provincial border and Sodankylä, raising national road 5 as part of the major route network for roads, and improvement of main road 80 between Sodankylä, Kittilä and Kolari.
- **Infrastructure projects as part of the business development projects:** Improvement of transport connections of the Kemi bioproduct mill (Kemi town zone and minor road network), improvement of transport connections of the Kemijärvi bioproduct mill, and the improvement of national road 5 by the town centre of Sodankylä as part of the Sakatti mining project.
- **Rail projects:** Increasing the capacity and speed of the rail section between Oulu, Kemi and Rovaniemi, electrification of the Laurila–Tornio–Haaparanta rail section, and electrification of the Kemi–Kolari rail link.
- **Other infrastructure projects:** Deepening of the Ajos shipping lane in Kemi and widening and deepening of the shipping lane of the port of Tornio. Development of the airports in Lapland.
- **Of the long-term projects,** the most important ones are the further planning of the Kolari–Ylläs–Levi rail connection and the Salla-Kantalahti rail connection.



Measures for a diverse selection of means that can be implemented regionally

- **Continuous transport system work:** Safeguarding resources and continuity of the transport system work and the transport safety operator
- **Coordination of transport and land use:** Promotion of sustainable mobility in master and town planning located in regional centres and the promotion of implementation possibilities of future infrastructure projects with town planning.
- **Promotion of sustainable mobility:** Drawing up plans for sustainable and safe mobility for each region, gradual increase in focus on walking in urban areas and tourism centres taking into account necessary structural changes and reductions in speed limits, investigating the possibilities to implement city bike systems in urban areas, drawing up mobility plans for largest employers in urban areas, piloting of new mobility services and car pooling for commuter traffic, utilisation of state aid in the funding of plans for mobility guidance and infrastructure measures, investigating the preconditions for safety deficiencies in school trips and for sustainable mobility, expanding the activities of transport safety groups to also include sustainable mobility more than before, and keeping the transport safety plans up-to-date
- **Trip chains:** Implementation of the Rovaniemi tourist information centre, development of shared ticket and information systems in partnership with public transport operators, development of the standard of fixtures and information at passenger transport hubs (railway stations, Matkahuolto, main stops of municipal and tourism centres), development of the standard of fixtures and information on stops along the trunk routes of public transport, and piloting of new mobility services as part of sustainable trip chains
- **Public transport:** Mitigating the impacts of the coronavirus pandemic with active cooperation between various public transport operators, drawing up the service standard definition for ELY's public transport services, supplementing market-based transport with contract transport, potential utilisation of tourism, keeping local transport plans up-to-date, reviewing of trunk lines, easy-to-use ticket products, and real-time information.
- **Passenger transport:** Regional pilots for opening and combining passenger transport and establishing the operations on the basis of experiences from the pilots.
- **Air transport:** Continuation of cooperation in interest representation, active role in the transition of air transport and the development of efficient trip chains in cooperation between operators.
- **Rail transport:** Development of scheduled services and staged development of connections and functioning trip chains as a whole in cooperation between various operators.
- **Reduction of transport emissions:** Regional driving power studies and development of electric vehicle charging infrastructure
- **Continuous prioritisation of maintenance:** Continuous prioritisation of maintenance and functional classifications of roads with low traffic volumes
- **Logistics and transport chains:** Study on rest areas in Lapland and the investigation of cooperation opportunities for SMEs
- **Development of digital infrastructure:** Drawing up local or regional data communication plans and utilisation of new funding channels in the development of digital infrastructure.

Impact assessment – impacts according to the national assessment framework

Impact assessment is based on the impact assessment of the national transport system plan

In the national transport system plan, impacts are assessed with regard to accessibility, service level of trips and transportation, economic, ecological and social sustainability, and the safety of the transport system.

The development strategies and measures of this plan have a particular impact on accessibility, the service level of trips and transportation, ecological sustainability and the safety of the transport system.

Improvement of accessibility is a key theme of the plan

The development strategies emphasise the efficiency of trip chains, the condition of the road network, cross-border connections, and international accessibility with air transport.

When implemented, this plan will make it possible to retain and improve competitiveness of tourism and industry, which are the key sectors in Lapland.

The service level of trips and carriage of goods will improve as a result of the implementation of the plan

With respect to the service level of trips, the plan emphasises especially the streamlining of trip chains in passenger transport from the viewpoint of residents and visitors. As a result of the implementation of the plan, the trip chains for both of these groups have improved in terms of availability of information, shared use of tickets, and the harmonisation of timetables.

The international transport corridors and their logistical services are emphasised in the service level of carriage of goods. In addition, the operating preconditions for HCT transport, connections to ports and removing bottlenecks in rail connections were also emphasised.

The role of sustainability has become more prominent

The plan emphasises especially the reduction of the carbon dioxide emissions of transport by presenting measures for more widespread use of alternative driving powers and for the promotion of sustainable mobility and carriage of goods. However, the reduction possibilities

are affected by the long distances in Lapland, the share of urbanisation, international connections, and the direction of industrial transportation.

Social sustainability is taken into account with a regional type-specific division of the development strategies, which accounts for different possibilities in different areas.

Economic sustainability is visible in the measures in the prioritisation of the development of transport links that are necessary for the region's livelihood.

Safety is a boundary condition for development, and none of the measures must diminish it

In Lapland, there are existing operating models for transport safety work, which are being continued. In addition, safety is a boundary condition, and none of the measures must diminish it upon implementation.

There are fairly few separate safety measures presented in the plan because the region has an operating model for continuous transport safety work.

Monitoring

The coordination of the monitoring and implementation of the plan is the responsibility of the working group for the regional transport system.

The group is responsible for the promotion and monitoring of the targets and measures specified in the plan. Monitoring of the implementation of the targets is based on assessment indicators presented in section 2, which are developed in cooperation and assessed each year. Necessary monitoring of the operating environment and reaction to it will be included in other strategic development of the region.

Due to the logistical location of Lapland, it is important that transport system cooperation extends to cooperation with cross-regional operators and those in the Barents Region in addition to local operators. It is worth linking the monitoring, for example, with the monitoring of the transport and logistics strategy for Northern Finland.

The monitoring of the implementation of the development measures is based on the implementation of the measures presented in

the plan. It is key that the working group assumes clear, coordinated responsibility for the monitoring and that it convenes sufficiently frequently in order to maintain responsiveness to possible changes in the operating environment and financing options.

In the promotion and monitoring work, the Transport 12 plan, the financing framework and the target of socio-economic efficiency must be taken strongly into account.

In future, the objective is that the methods of assessing the impacts of the national transport system plan will be harmonised so that the regional councils and municipalities are able to deploy impact assessment methods that are compatible with the national level, e.g. in order to increase transparency in decision-making. This must be utilised in the development of monitoring.

A nationally developed transport system analysis should be utilised in monitoring. In future, the regions will take part in the production of information required for the analysis.

