ARCTIC BUSINESS FORUM YEARBOOK 2019

May 2019

Compiled and edited by Timo Rautajoki & Viivi Lakkapää
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ARCTIC COUNCIL MEMBER STATES

CANADA

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ARCTIC CIRCLE
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1. FOREWORD – STATE OF THE ARCTIC BUSINESS 2019

This is the 10th time, when Lapland Chamber of Commerce is organizing the Arctic Business Forum. A lot has happened in the world during these almost 10 years. In the beginning, there was some kind of Arctic Business boom. Now we know the future of Arctic business depends on the Climate change. So far, we have especially in Finland concentrated on problems created by the global warming. This all has had also positive impacts in northern regions, but these issues are not so far on the agenda in Finnish debate.

The business community in Lapland, as well as in whole Finland wants to do sustainable business. We must fight for the better future knowing, that limiting the global warming to 1,5°C is the only way to succeed in that. Lapland Chamber of Commerce has prepared statement to the new government of Finland to be able to continue sustainable and responsible growth in the Finnish Arctic, Lapland. Our message is following:

The business community of Lapland is agreeing with the idea of the main negotiator for the upcoming Government of Finland, Antti Rinne, that by strengthening the responsible economic growth, Finland’s joint strategy will be extended to include the development of a national development program for the northernmost part of Finland. The business life of Lapland is growing responsibly by using the latest available technology and reducing its own and its customers’ carbon footprint. By using the latest and greatest technology, both consumers and tourists coming to the province will be able to offer concrete opportunities to participate in the fight against climate change via circular economy, sustainable forestry and responsible tourism and digitalization.

The EUR 1.5bn bioproduct mill to be built at Kemi by Metsä Group is a good example of Lapland’s responsible growth. In terms of skilled labor, there are and will be challenges, when we scrutinize the
demographic structure of Lapland. There is a need to invest in the
development of both Lapland universities and vocational training, as well as investments in infrastructure.

More than one third of the land area in Lapland is currently protected and most of it is covered by the NATURA 2000 program. With regard to the protection of biodiversity, Lapland already bears a great deal of responsibility. In this situation, flexibility must be provided, including: Deviations from the NATURA 2000 program for the implementation of tourism and other sustainable growth investments must be made possible.

Most of the companies’ transportation is road transport and consists of raw materials, industrial and mining products, transport of trade and tourists. The fight against climate change and the reduction of the use of fossil fuels will require the future government to be open-minded and boldly renew the financing of the entire Finnish transport system and transport infrastructure. This should not be achieved by raising taxes or by imposing new taxes on air tax, but by enabling and encouraging companies to use new types of low-carbon logistical solutions without undermining competition.

- The most important goal of the Finnish EU Presidency is to influence the agenda and organization of the future Commission in such a way that the Arctic, the northern transport connections and the future EU program will be implemented in the best possible way. Particularly important for Finland is the extension of the future TEN-T network from the north of Lapland to the Arctic Ocean, in the direction of both Norway and Murmansk.

May 7th, 2019 in Rovaniemi

Timo Rautajoki
President and CEO
Lapland Chamber of Commerce
2. RESPONSIBLY GROWING LAPLAND

Since the middle of this decade, the business life of Lapland has grown in all industries. According to Lapland’s Business Survey 2018, net sales in all business areas have increased by 9.5% in 2017 (6.5% in the whole country), and the number of employees increased by 3.2 from the previous year. Industrial exports grew by as much as 15.2 % (9.1 % in the whole country) and Lapland is one of Finland’s largest export regions. The rich economic structure creates many supporters for growth.

The growth of the business sector in Lapland is based on several strong industries, with the strongest growth in 2017 in mining and quarrying (23.3%), tourism services (13.8%) and industry (12.3%). In 2017, Lapland was Finland’s fifth largest export region with an export value of EUR 4.2 billion. The Sea Lapland region is a major industrial concentration, and three of Finland’s metal ore mines are located in Lapland. There are two ports in Lapland, Kemi and Tornio. Lapland is also a growing destination for international tourism. In 2018, the number of overnight stays registered in Lapland was about 3 million (+3%), of which foreigners accounted for about 51%. There is also a lot of investment in Lapland, and there are also good opportunities for continued investments. In addition to growth centers in Rovaniemi and Kemi-Tornio, Lapland’s growth is concentrated in the Northern Lapland regions and Fell Lapland, which are growing from tourism and mining.

Lapland is characterized by close international cooperation, especially with neighboring countries. Logistics connections operating in Lapland - air traffic, rail links, TENT-T network and data cable connections - are prerequisites for sustainable growth. In addition to these, digitalization offers significant opportunities for business development in Lapland.
Lapland is also a center of excellence with specialized expertise in Arctic research, cold technology and testing as well as intelligent / automatic traffic. The University of Lapland and the University of Applied Sciences in Lapland, together with secondary education, respond to a rapidly growing labor shortage through their versatile training offer.

The business life of Lapland is aware of the importance of reacting to climate change, as the effects in the north are already visible and warming will increase dramatically, if the control measures fail to meet the targets, that have been set. Companies in Lapland continue to have the opportunity to grow responsibly by reforming their operations using the latest technology available and reducing their own and their customers’ carbon footprint. The export of the companies, that have the know-how for new technology must be promoted. Lapland wants to offer both consumers and tourists coming to the province the opportunity to participate in concrete measures to prevent the climate change i.a. in circular economy, sustainable forestry and responsible tourism and digitalisation.
AREAS OF RESPONSIBLE GROWTH:

1. Business and Natural Resources

Lapland, with its diverse and responsible business, benefits all of Finland. The business community in Lapland wants to offer buyers of products and services and tourists coming to the province, solutions, that reduce the carbon footprint of both the companies and the customers. The bioproduct mill investments planned by the forest industry can be implemented in Lapland, as well as the biofuel production. Sustainable and responsible use of wood as a raw material and the growth of wood, that has accelerated by the effect of warming up to now, also enables the role of Lapland forests as an important carbon sink. Developing the circular economy by utilizing the side streams of industry and mines is a significant part of Lapland’s future raw material efficiency. Bioproduct factories enable the establishment of new research and production facilities to develop new wood fiber products i.a. as plastic substitute.

• Sustainable and responsible use of wood in Lapland must still be possible
• When it comes to Mining Act, there should be made only thoughtful changes, that will not weaken mines operating conditions.
• It should be possible to collect Natura areas to use in case of general good and enable the possibility to make a shift to a substitute land from other land areas.
• Continuous complaints on the same basis need to be reduced. Authorization authorities need to be given the necessary resources to ensure, that the activities are sufficiently smooth and that the control of permits is effective.
• Lapland’s energy production is based on renewable energy, such as the development of wind power and current hydropower production, as well as the utilization of forestry waste, especially as a substitute for peat in energy production.
• The clean nature of Lapland is also a natural resource for tourism, especially in the development of nature tourism, where also national parks and nature reserves play an important role.
2. Accessibility and Logistics

Most of the companies in Lapland use roads for their freight transportation. Transport consists of products such as raw materials, industrial and mining products, transport of goods and tourists. The fight against climate change and the reduction of the use of fossil fuels are both a major challenge and an opportunity for Lapland and it requires the future government to be open-minded and courageous in reforming the entire Finnish transport system and moreover, funding for transport infrastructure.

- Increasing rail transport between southern and northern parts of the country both in freight and passenger traffic by developing night train / autotrain traffic and multimodal transport of trucks and trailers.
- Experimenting with rail traffic competition between Lapland, Northern Finland and Norrbotten as part of sustainable tourism and the development of the Tornio-Kolari railway connection as a tourist route
- Developing transport chains that support responsible tourism
- Revision of Finland’s air transport strategy and development of direct air connections between Europe and Continents, eg from Asia to Lapland to reduce air emissions.
- Continuing and developing an intelligent road project and promoting an Arctic Connect data cable project
- Renovation of VT4 between Kemi-Inari and VT21 in collaboration with Norway between Tornio-Kilpisjärvi
- Deepening the lanes leading to the ports of Lapland - Larger ship sizes, low carbon exports
- Development of international railway connections in Lapland, development of the Arctic Railway
3. Labor and Skilled Work Force

The shortage of skilled labor has also become a serious obstacle to corporates growth in Lapland. The shortage of labor is threatening to slow down economic growth in Finland as a whole, but it is also a national interest to note the special needs of Lapland. The problem is exacerbated by the skewed age structure of the population and the rapid aging.

- Funding for universities, polytechnics and vocational institutions should be maintained at least at the previous level
- Making conversion training more flexible for the needs of tourism, the bio-product industry and the mining industry
- Increasing the number of foreign students and encouraging them to stay in Lapland
- Increasing work-based immigration
- Removal of Cross-border barriers from labor mobility in Northern Kalot
3. REPORT ON THE ARCTIC RAILWAY COMPLETED

A report on the Arctic railway by a Finnish-Norwegian working group has been completed. For the time being, it does not present any further measures for promoting the railway project.

The task of the working group was to examine the preconditions for the construction of the Arctic railway and to consider the factors that should be taken into account, if the planning process continued. The report focused on 1) possible finance models, 2) planning and permit procedures and 3) environmental issues and questions relating to the Sámi.

“I want to thank all those in Finland and Norway who contributed to the preparations for their cooperation. During the preparation work, the preconditions for the Arctic railway project and the requirements for completing it have been reviewed with different parties,” says Anne Berner, Minister of Transport and Communications of Finland.

No decision on the construction of the railway or the choice of routing has been made either in Finland or in Norway. In order to be able to launch the planning, a political decision on the implementation of the project would have to be made in both countries. The current report is a preliminary report of the Rovaniemi-Kirkenes railway routing. While the report was being drafted, it was not possible to assess all factors affecting the rail project.
Profitability assessments

According to all the finance models used in the report, the project would not be commercially viable. The annual transport volume would have to be around 2.5 million tonnes to cover the maintenance costs each year. According to current information, such volumes cannot be regarded realistic without any significant changes in business in the area or in the costs of different transport modes.

From the perspective of tourism in the Finnish Lapland, all measures that would make travelling to Lapland easier would be welcome. The Arctic railway would strengthen the link between Lapland and the wider Arctic area. However, the construction of the railway would not be financed through income from tourism, and tourism is not a sufficient ground for the project.

The report also indicated that full utilisation of the Arctic railway as part of a travel chain to Central Europe would, above all, call for an increase in the capacity of the main rail line in Finland, particularly in its busiest section between Helsinki and Tampere.

Planning and permit process would have multiple phases in Finland and Norway

The planning and permit process would be long and include multiple phases in both Finland and Norway. Naturally, there are differences between Finland and Norway in the stages of the rail planning. If a decision was made to continue with the planning of the project in future, the next stage could be a cross-border study on how to integrate the planning processes.

Like Norway, Finland is starting to implement a 12-year transport system planning process. It provides a certain framework for the possible further planning, because the Arctic railway planning would have to be fitted into the transport system plans of both countries. Even at its fastest rate, the planning and construction of the railway would take at least 15 years.
Effects on the environment and the Sámi people

According to the report, the Arctic railway would have diverse impacts on the environment and the Sámi people. The uniqueness and sensitivity of the natural environment in the North requiring special attention are widely known. If the project was to be promoted, the participation of the indigenous people, the Sámi, must be ensured so that no irrevocable damage would be caused to their culture or livelihoods. There are several measures and procedures in international legislation as well as in the national legislations of Finland and Norway ensuring that the internationally recognised special status and rights of the Sámi to their homeland, language and culture are correctly taken into account. It is essential that the Sámi, reindeer herders and other parties that would be affected by the railway project would take part in the planning process from the beginning.

The Finnish members of the working group led by the Finnish Ministry of Transport and Communications included the Ministry of the Environment; Transport Agency; Regional Council of Lapland; Centre for Economic Development, Transport and the Environment for Lapland; Joint Municipal Authority for Regional Cooperation in Lapland; Sámi Parliament; and Skolt Village Assembly and Norway’s representatives were from the Ministry of Transport and Communications; Norwegian Railway Directorate; the County Governor of Finnmark; Finnmark County Municipality; and the Norwegian Sámi Parliament. Other stakeholders were also heard in the process. The term of the working group was from 9 May until 14 December 2018.
After the end of the working group’s term, the Ministry of Transport and Communications and the Sámi Parliament of Finland conducted negotiations in accordance with section 9 of the Act on the Sámi Parliament concerning the work of the working group. In a memorandum delivered to the Ministry of Transport and Communications by the Sámi Parliament, views are presented on the contents of the working group’s final report and the sub-groups’ reports. The memorandum is available at the Gateway to Information on Government Projects.

Final Report of the Joint Working Group Between Finland and Norway on the Arctic Railway, Publications of the Ministry of Transport and Communications 2019:4:

More info:
4. EXISTING RAILWAY PLANS IN THE ARCTIC

Project Arctic Railway from Rovaniemi to Kirkenes is not the only railway investment plan in the Arctic. Here is an updated list of plans from different parts of the Arctic region. Total investment sum is huge, over 50 billion €. (50,730 bn€ - 44,930 bn€)

1. North Slope rail extension project, Alaska, USA

Northern Alaska has petroleum, natural gas, and mineral resources, that could be developed. However, compared to other areas with these resources, this area has limited access and high operating costs. The North Slope has higher transportation costs and longer supply links than other regions of Alaska and the contiguous United States. A railroad to the North Slope has been considered, as it has the potential to transport large volumes of bulk freight at a competitive cost. It may also lead to new oil drilling and mining opportunities. The rail link could facilitate the movement of bulk freight required for large scale horizontal drilling as well as hydro-fracturing of shale oil and shale gas bearing formations. One route for this extension would be approximately 720 km long and would likely connect to the ARRC mainline at the Dunbar siding near Nenana. There are also other potential routes. The cost of this project is estimated at nearly 6,5 billion €.

More info:
2. **Alaska-Canada rail link**

Two existing projects to connect Alaska railway with Canadian railway system: Alaska Railroad Group project in cooperation with former U.S. Senator and Alaska Governor Frank Murkowski project with 1800 km new railroad and longer connection by G7G Railway Corporation 2450 km. Shorter project 15,7 billion €, longer project 21,5 billion €

**More info:**
- http://g7grailway.com

3. **Keflavik-Reykjavik, Iceland**

Work is set to begin in 2020 on a brand-new high-speed train link whisking passengers between Keflavík International Airport (KEF) and the Icelandic capital of Reykjavik in under eighteen minutes. The service will run every fifteen minutes, with capacity for 2,400 passengers an hour. The train will be called the ‘Lava Express’, travelling as it does past the famous lava fields of South-West Iceland.

The line will be 49 km long, of which 14 km will be underground, towards the Reykjavik end. The average speed of the train will be 180 km/h, with a maximum speed of 250 km/h. The possibility of intermediate stops in the municipalities of Kópavogur and Hafnarfjörður is being looked into. The terminus in Reykjavik will be at the site of the current BSÍ bus station.

The estimated cost of the entire project is 750 million €, to be funded privately with no contribution from the Icelandic State. Talks are already under way with various foreign investors.

**More info:**
- https://icelandmonitor.mbl.is/news/nature_and_travel/2016/10/06/work_on_iceland_s_new_250_km_h_airport_train_to_beg/
4. **Fauske-Tromsø, Norway**
Apart from a line from Narvik into Sweden, Norway’s railway network ends at Bodø. The Government has announced it will spend two million kroner on a feasibility study to extend the railroad from Fauske (near Bodø) all the way to Tromsø, a length of approximately 500km. Jernbanedirektorat, Norwegian railway authority has updated plan from 1990’s to build this new railway. There are several options for railway line and the length varies from 400 to 500 km. Cost estimates are about 60 billion NOK, which is about 6.2 billion €.

**More info:**
- [https://www.jernbanedirektoratet.no/contentassets/f803b1f8ab134fb485825685d40c0aae/jernbanedirektoratet-presentasjoner-nnb-innspillkonferanse-080618.pdf](https://www.jernbanedirektoratet.no/contentassets/f803b1f8ab134fb485825685d40c0aae/jernbanedirektoratet-presentasjoner-nnb-innspillkonferanse-080618.pdf)

5. **Norrbotniabanen railway Umeå-Luleå, Sweden**
New 270 km long coastal railway from Umeå Västerbotten to Luleå Sweden. Total costs 3.2 billion €. Swedish Government has decided to start implementation of this railway from Umeå to Skellefteå and after that up north to Luleå.

**More info:**
- [http://norrbotniabanen.se](http://norrbotniabanen.se) in Swedish
6. **Inlandsbanan railway reconstruction Gällivare-Kristinehamn, Sweden**

This railway is between Gällivare Norrbotten and Kristinehamn Värmland. This about 1288 km railway was built in early 1930’s and it was ready in 1937. Main transport has been raw materials to industry, mainly timber and industrial products to Southern Sweden. Now, the most important traffic is in summer time passenger trains. The future of this railway is today promising, because Australian company Macquarie Group is interested to reconstruct the track for new supporting railway to industry and it is also shortest direction from Oslo Norway to Narvik. It might also become important transport route for Norwegian fish export. About 20 million tons in years of fish export is coming from Norwegian counties Nordland and Troms and this reconstructed railway is the shortest way to export fish to Central Europe. Cost estimate is 180 million €.

**More info:**
- https://www.svt.se/nyheter/lokalt/jamtland/miljardinvestering-i-inlandsbanan

7. **Murmashi-Lavna railway, Murmansk Region, Russian Federation**

New 46 km long railway from Murmashi to Lavna on the western side of the Kola Bay is important part of Murmansk Transport Hub- project. Construction has started in 2016. It includes line electrification, a bridge across the river Tuloma, eight bridges and four viaducts. Project has suffered from funding, but it is going to be ready in 2021. Total costs about one billion €.

**More info:**
8. **Belkomur railway project, Russian Federation**

Belkomur has been on the investment lists already from the late 1930’s. It was stopped in 1950’s due to a mass amnesty of the main work force GULAG prisoners. The file was reopened in 1990’s and in 1995 the project consisted of new railway between Arkhangelsk-Syktyvkar-Kudymkar-Perm and it got the name Belkomur (White Sea – Komi – Urals).

In 2017 Arkhangelsk region signed agreement with Chinese Poly Group to build 795 km long new railway, which makes 1252 km long Belkomur ready. After that, there have not been any news regarding the project except connection to Chinese giant project called Polar Silk Road. Cooperation between Russian Federation and China has been increasing in Brics, but also in Chinese Silk Road projects. Main interest of Chinese companies has been in Yamal LNG project and cooperation continues also in LNG2-project, which creates also one part of the Polar Silk Road from the port of Sabetta via Northern Sea Route to China. However, the success in these projects can impact also positively to Belkomur and the implementation could start before 2030. Total costs are about 5 billion €.

**More info:**
9. **Northern Latitude railway, Russian Federation**
The Northern Latitudinal Railway project, due to the link Obskaya, Salekhard, Nadym, Khorei, Pangody, Novy Urengoi and Korotchayevo, as well as related infrastructure, involves the administration of the Yamal-Nenets Autonomous Area, Russian Railways, Gazprom, Novatek and other companies involved in Arctic freight traffic. The 707-kilometer railway is to be built in 2018-2022. The Nadym-Salekhard section, including a bridge across the Ob River, will cost about 3,5 billion €.

**More info:**
- https://arctic.ru/infrastructure/20170228/563844.html

10. **Arctic Railway Rovaniemi-Kirkenes**
This about 500 km long new railway and it is estimated to cost 2,9 billion €.

**More info:**
- https://www.arcticrailway.as
- https://arcticcorridor.fi
5. EUROPEAN HIGH NORTH INVESTMENTS UP TO 2030

Lapland Chamber of Commerce has been evaluating the investment potential in European High North about 15 years. Listing and evaluation of the projects was about 10 years ago very easy. Just by defining financing sources and demand. Financial crisis after 2008 changed the situation, especially in mining investment projects world market prices and demand were decreasing. Also, the future of Arctic oil and gas has been many years on the agenda. Low oil prices have challenged the profitability of Barents Sea Offshore projects. In spite of this Norway has still developed exploration and projects like Johan Castberg oil field.

Climate change has had a bigger impact on Arctic investments within the last 2-3 years. IPCC published last year Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways in the context of strengthening the global response to the threat of climate change. This report has started so far strongest debate regarding investments in the High North. Production and use of fossil fuels, all other kind of fossil fuel infrastructure, all transport using oil fuels, energy production, forest industry investments and the role of forests as a carbon sink are now on every political agenda. Only mining industry seems to offer positive alternative in mines which produce so called battery metals.

This debate is maybe strongest in Norway regarding the future of oil and gas production especially in the Barents Sea. According to Reuters, based on survey by Norway’s statistics agency SSB. Oil and gas companies working in Norway have lowered their investment forecasts for 2019 to 172.7 billion crowns ($20.1 billion) from 175.3 billion crowns seen in November. In 2020 investments are expected to fall to 158.5 billion crowns, according to initial forecasts, though
the forecasts could be revised upwards in the months to come, it added. However, several plans for development and operation are expected to be submitted to the government in both 2019 and 2020 the agency said in a statement. If the schedules for these plans are realized, the accumulated investment costs in 2020 from these projects will increase the investment in field development compared to the present estimate. Norway’s government has also decided that Norway’s sovereign wealth fund, largest in the world thanks to petrodollars, will sell off stakes in oil and gas exploration and production companies to reduce its exposure to oil. Government defined that the question was about exploration and production companies, with no plans to sell broadly diversified energy sector.

The debate regarding bioproduct investments and forests as carbon sink has been very active in Finland in the recent parliament election and it has been escalating in talks forming the next government and its program. According to model calculations made by the Natural Resources Institute Finland, forests will remain efficient sinks in the future even, if (due to the uncertainties involved) no account is taken of the positive impact of climate change on tree growth. In scenarios where, to satisfy the near future growing needs of the bioeconomy, the annual volume of felling increases by less than 10 million cubic meters, the sink effect initially decreases a little until 2030. Thereafter, it is restored for the next 10 years. Only in the scenario involving maximum felling volumes at around 20 million cubic meters above the present level, without compromising on future felling opportunities, did the greenhouse gas balance of forests vary between a minor sink effect and net emissions. Felling volumes could therefore increase by around 20 million cubic meters before forests become a source of emissions.

This question is essential in Lapland with three big bioproduct investment plans ahead. Total number of these plans is five in Finland and the main issue is the sufficiency of forest resources and the total volume of loggings.
### EHN Investments up to 2030 – Regions (M€)

<table>
<thead>
<tr>
<th>Region</th>
<th>Investment (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lapland</td>
<td>13 690</td>
</tr>
<tr>
<td>Oulu Region</td>
<td>14 040</td>
</tr>
<tr>
<td>Kainuu Region</td>
<td>3 940</td>
</tr>
<tr>
<td>Norrbotten</td>
<td>10 830</td>
</tr>
<tr>
<td>Västerbotten</td>
<td>8 890</td>
</tr>
<tr>
<td>North Norway</td>
<td>40 065</td>
</tr>
<tr>
<td>Murmansk Region</td>
<td>8 300</td>
</tr>
<tr>
<td>Arkhangelsk Region</td>
<td>9 910</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>109 665</strong></td>
</tr>
</tbody>
</table>

### EHN Investments up to 2030 – Countries (M€)

<table>
<thead>
<tr>
<th>Country</th>
<th>Investment (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Finland</td>
<td>31 670</td>
</tr>
<tr>
<td>North Sweden</td>
<td>19 720</td>
</tr>
<tr>
<td>North Norway</td>
<td>40 065</td>
</tr>
<tr>
<td>North West Russian Arctic</td>
<td>18 210</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>109 665</strong></td>
</tr>
</tbody>
</table>

### EHN Investments up to 2030 by Branches of Business (M€)

<table>
<thead>
<tr>
<th>Branch</th>
<th>Investment (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>14 920</td>
</tr>
<tr>
<td>Oil and gas</td>
<td>17 215</td>
</tr>
<tr>
<td>Mining industry</td>
<td>14 680</td>
</tr>
<tr>
<td>Hydro power</td>
<td>1 075</td>
</tr>
<tr>
<td>Wind Power</td>
<td>12 080</td>
</tr>
<tr>
<td>Bio power</td>
<td>690</td>
</tr>
<tr>
<td>Nuclear power</td>
<td>7 140</td>
</tr>
<tr>
<td>Energy transfer networks</td>
<td>5 695</td>
</tr>
<tr>
<td>Trade</td>
<td>1055</td>
</tr>
<tr>
<td>Tourism</td>
<td>3 585</td>
</tr>
<tr>
<td>Transport infrastructure</td>
<td>22 110</td>
</tr>
<tr>
<td>Public investments</td>
<td>9 420</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>109 665</strong></td>
</tr>
</tbody>
</table>
European High North – Investments up to 2030 (M€)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Lapland</th>
<th>Oulu Region</th>
<th>Kainuu</th>
<th>Norrbotten</th>
<th>Västerbotten</th>
<th>N Norway</th>
<th>Murmansk</th>
<th>Arkhangelsk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>2065</td>
<td>650</td>
<td>993</td>
<td>540</td>
<td>4006</td>
<td>380</td>
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<td>80</td>
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<td>4631</td>
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<td>6425</td>
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Lapland is the northernmost county of Finland with about 180 210 inhabitants. About 4 500 of inhabitants are indigenous Sami people. The total area of the county is 99 000 km2, which equals to 30% of the whole of Finland. Lapland is sharing borders with Sweden, Norway and Russia, altogether 1642 km. There are two international border crossings to Russia, six to Sweden and six to Norway.
The six subregions of Kemi-Tornio, East Lapland, the Valley of Tornio, Northern Lapland, the Region of Rovaniemi and Fell Lapland form the region of Lapland.

Rovaniemi is the administrative capital of Lapland with appr. 60,900 inhabitants. The other cities in Lapland are Kemi appr. 22,300 inhabitants, Tornio appr. 22,500 inhabitants and Kemijärvi appr. 8,100 inhabitants.

**Business in Lapland**

Clean nature and abundant natural resources provide a unique, solid foundation for the business sector in Lapland. The cornerstones of the region's economy are forest industry, metal industry, mining industry, forestry and tourism. The energy sector, too, will play an increasingly important role in the economy in future. Economic growth of Lapland has, however, been more positive than the national level growth. The strong growth in tourism and mining industry have affected also to other branches of business, like trade and business to business services.

Key economic figures of Lapland:
- Population 178,530
- Jobs 68,930
- Total amount of companies 12,710
- Total turnover of all companies 13.8 bln. €
- Value of industrial export 4.188 bln. € (No. 5 of regions in Finland)
Industry is the most important branch of business in Lapland. Total turnover of industry is 7 bln€ and it has about 11,5000 employees. Number two business is trade with turnover of more than 2.3 bln€ and over 6,000 employees. Tourism is number three with approx. 850 m€ turnover and 6,400 employees. Building sector is next with 940 m€ turnover and over 5,300 employees. Then is transport and logistics with 570 m€ turnover and almost 4,000 employees. Mining is a bit smaller with 550 m€ turnover and 1,700 employees.

The prospects for development in Lapland

Changes in the livelihood structure of Lapland have been great. In industry, the share of service business as an employer has grown. Also, in the change in public sector service production, the share of private service providers continues to grow, so new jobs are mainly created for companies. Lapland has a strong export-driven large industry that enables growth in other businesses as well. Growing sectors include mining and industry, tourism and services.

The continuous and rapid change in the international economy, as well as the demands for innovation and competence still pose challenges for the operations, growth and internationalization of Lapland’s businesses. The importance of natural raw materials will increase with the creation of new SMEs. Partnerships globally, especially with the northern best partners, in innovation, subcontracting and subcontracting, production, sales and marketing, as well as financing and capitalization play a decisive role in the development of business competitiveness. Lapland companies have gained new business opportunities for international markets, for example, Asia. The US market also shows some signs of growth. Especially as a tourist destination Lapland’s attractiveness is growing.

Increasing labor demand is reflected in the decline in unemployment in Lapland. Stronger than the number of employed people, this is also reflected in the development of the employment rate. As a result
of the positive development prospects of the business sector and the elimination of labor, labor demand is expected to continue to be brisk, with a positive reflection on the employment and unemployment trends in the next few years.

Problems with the functioning of the labor market appear as recruitment problems and labor supply problems. The skills requirements of the workforce have changed and job seekers' knowledge does not always meet the requirements of the workplace.

The economic potential of the area, such as energy resources and potential new routes to open up, emphasize its strategic importance. The transition of the global economy to Asia will change the status of the region. Increasing interest in more and more countries is growing in the Arctic region’s opportunities and the growing importance of the region.

Population decline has continued in Lapland in recent years, with the exception of a few individual municipalities. Younger age groups are clearly more educated than older age groups and the educational level of the population continues to rise. Increasing immigration is a chance and a challenge for Lapland. Immigrants enliven and diversify their business life and bring new innovations and internationality.

University of Lapland carries out a joint Lapland University Program Innovation Program 2014-2020 in its research and development activities. During the current funding period, the internationalization of research and development activities at Lapland universities will be strengthened and the importance of funding from outside the region will be emphasized.

Possible realization of bio-economics projects in Kemi and Kemijärvi require improvement of the road condition. New rail links are needed for the needs of mining and tourism industries.
5.1.1 Investments in Lapland up to 2030

The next coming decade 2020’s seems to be very active for Lapland’s business community. Total value of planned investments is almost 14 billion €. Climate change is a major issue for Lapland creating new challenges and problems. According to several experts like Mr. Petteri Taalas, Secretary-General of World Meteorological Organization (WMO) global warming has also positive impacts in the northern regions, but these issues are not on the agenda in Finnish debate.

The debate regarding bioproduct investments and forests as carbon sink has been very active in Finland in the recent parliament election and it has been escalating further in the talks, when forming the next government in Finland and its program. One huge investment project in Lapland, the bio product mill in Kemi, was escalating the problem. The Natural Resources Institute of Finland has evaluated, that felling volumes could therefore increase in Lapland due to the positive impact of climate change on tree growth, but this opinion is not at all unanimous in Finland.

Lapland is one of the most important industrial regions in Finland and the export from the region is almost 10 % of the total export of Finland. In future, this position stays strong, because total value of all industrial investment plans in Lapland is more than 4 billion €. Biggest single industrial project is The Polar King, bio product plant in Kemi by Metsä Group. It is also interesting to see, that the Chinese investors are main partners in two other planned bio product projects, Boreal Bioref Oy in Kemijärvi and Kaidi project in Kemi.

Total value of the ongoing mining expansion projects in Lapland is almost 0,5 billion €. Sokli phosphate mine by Yara Finland in Savukoski, located in Eastern Lapland is making a comeback to
investment plans. Company announced, that they start again the evaluation of the possible implementation of one billion € project. Another big mining investment plan of Sakatti nickel mine by Anglo American is expected to be started in 2020´s. More mining plans can be expected within next 10 years, because prospecting and exploration in Lapland is growing all the time.

Big continuing growth of tourism can also be seen in the investment plans of new hotels and resorts. Total value of all plans is over 2,3 billion €. There seems to be a demand for investments, but on the other hand debate regarding the sustainable tourism and the growing carbon footprint of flying have risen also some suspicions. The actual size of the planned new hotels is growing. Two companies are planning to construct tower hotels in Rovaniemi and there are also big plans in resorts like Levi, Ylläs and Saariselkä still alive.

Transport infrastructure of Lapland needs upgrade in roads and railways, if the big investment projects are about to start. The sum of needed investments is more than one billion €. New bio product mills need deeper seaport in Kemi, railway electrifications and reconstruction of highways from southern Lapland to Norwegian border and also forest roads. Due to the growing tourism and increasing direct flights to Lapland, Finavia Oy is expanding airports in Rovaniemi, Kittilä and Ivalo. The new Rovaniemi airport terminal is going to be more than 10000 square meters.
## 5.1.2 List of Investments

### Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kemi–Tornio region Industry Maintenance Projects</td>
<td>300 m€</td>
</tr>
<tr>
<td>Kaidi Finland Oy, Kemi Bio Fuel Plant</td>
<td>900 m€</td>
</tr>
<tr>
<td>Boreal Bioref Oy, Kemijärvi Biorefinery</td>
<td>950 m€</td>
</tr>
<tr>
<td>Metsä Fibre Oy, Kemi Bio Product Plant Polar Giant</td>
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</tr>
<tr>
<td>Silent Partner Group Tornio Data Center</td>
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<tr>
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### Mining industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospecting and Exploration 50 m€ / year</td>
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<tr>
<td>Outokumpu Oyj, Kemi Chromium Mine Expansion</td>
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</tr>
<tr>
<td>Agnico Eagle Oy Kittilä Gold Mine Expansion</td>
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</tr>
<tr>
<td>Boliden Kevitsa Mine Expansion</td>
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</tr>
<tr>
<td>Rupert Resources Pahtavaara Gold Mine Reopening</td>
<td>50 m€</td>
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<tr>
<td>Anglo American/AA Sakatti Oy, Sakatti Nickel Mine, Sodankylä</td>
<td>1,5 bn€</td>
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<tr>
<td>Mawson Resources, Rompas Gold Mine, Ylitornio</td>
<td>500 m€</td>
</tr>
<tr>
<td>Yara Suomi Oy, Sokli Mine, Savukoski</td>
<td>1,0 bn€</td>
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<td><strong>Total:</strong></td>
<td><strong>4,040 bn€</strong></td>
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### Hydro Power

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Kemijoki Oy, Sierilä Power Plant</td>
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<td>Kemijoki River Salmon Ladder Projects</td>
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### Wind power

<table>
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<tr>
<th>Industry</th>
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<td>All Lapland Windpark Projects</td>
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### Energy transfer networks

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<tbody>
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<td>Pyhänselkä – Keminmaa, Connection to Sweden</td>
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<td>Lapland – Finnmark New Power Grid Line</td>
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<td><strong>Total:</strong></td>
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<td>Kemi – Tornio projects</td>
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<td><strong>Total:</strong></td>
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### Tourism

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<tr>
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<tbody>
<tr>
<td>Kakslauttanen Arctic Resort Oy, Utsjoki</td>
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<td>Merihovi, Kemi</td>
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<td>Lapland Hotels Oy, Rovaniemen Valionranta 1-2</td>
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<td>Senaatti Kiinteistöt Oy, Rovaniemi Hotel</td>
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<td>Santa’s Hotels, Rovaniemi, Expansion</td>
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<td>City Hotel Rovaniemi, Expansion</td>
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<tr>
<td>Levi Summit / Panorama Expansion</td>
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<tr>
<td>Laatumaa / Ylläs New Resort</td>
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<tr>
<td>Saariselkä Resort Expansion Plan</td>
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<td>Christmas Land, Rovaniemi</td>
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<td>Noitatunturi Oy, Pyhätunturi</td>
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<td>Valo Luxury Retreats Saariselkä</td>
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<td>Levi Slope and Lift Investments / West Point Village</td>
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<td>Small hotel etc. projects 50 m€ / year</td>
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<tr>
<td>Sokos Hotels Rovaniemi Tower hotel</td>
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<td>Trevian hotel Rovaniemi</td>
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<td><strong>Total:</strong></td>
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*Note: The document reference is from page 37.*
Transport infrastructure

VT 4 Rovaniemi Southern Highway 50 m€
Kemi Ajos Deep Sea Port 30 m€
Laurila – Tornio Railway Electrification 20 m€
Sevetti Road Reconstruction 15 m€
Kolari – Kilpisjärvi Road Reconstruction 160 m€
Kemijärvi Bio Product Plant Roads etc. 210 m€
Industry Investment Project Roads, Kemi 100 m€
Arctic Railway Rovaniemi-Kirkenes Planning 50 m€
Finavia Oy Rovaniemi Airport and Other Expansion 55 m€
Sokli Mine Transport Infrastructure 150 m€
Tornio – Kolari Railway Reconstruction and Electrifying 255 m€
VT4 Rovaniemi – Sodankylä Highway Reconstruction 160 m€

Total: 1,255 bn€

Public investments

Lapland Central Hospital Expansion Rovaniemi 120 m€
Other Public, Swimming Halls, etc. 50 m€

Total: 170 m€

All total: 13,690 bn€
Text by BusinessOulu

The Finnish region of Oulu (in this article the Oulu region refers to ‘Northern Ostrobothnia’) extends across Finland from the Gulf of Bothnia coast to the Russian border and has an area of 37 000 km² and is about equal in size to the whole of Netherlands.

The Oulu region is a growing region that has a population of about 247 000 people (4,5 % of the Finnish population). The population is well educated and Oulu has the youngest population in Europe (median age 34,7, 2016).
The Oulu Province belongs to a sub-arctic climate. The City of Oulu has a moderate climate due to its maritime location. Oulu is ideally situated at the junction of the main roads and railways of Northern Finland. Oulu Airport is the second largest airport (1 million travelers) in Finland, and the Port of Oulu is the largest port for unitized cargo transport on the Bay of Bothnia.

Business in Oulu Region

The Oulu region is an internationally recognized center of technology and expertise where conscious efforts have been made to develop ideal ecosystems for new technology and practical cooperation between training, research and private enterprises.

Oulu is surrounded by some major Northern European investments (worth more than 100 billion euros). Being the biggest city and the most significant logistics hub in Northern Scandinavia, Oulu provides an excellent location for the companies working for major projects.

ICT

The Oulu ecosystem has established itself as a hotbed of wireless technologies. The area offers an excellent opportunity to participate in developing future technologies. Oulu – the Capital of Northern Scandinavia – has a foundation of more than 40 years of technological success stories. Today, Oulu is an even stronger R&D community of several global companies.

Over the past couple of years, the ICT ecosystem in Oulu has diversified considerably. Oulu provides an exceptionally wide and versatile selection of shared R&D environments and living labs to develop solutions further and test their functionality in real environments. Today it is complemented by clusters producing finance, health tech and automotive solutions.
Basic Industry

Large investments in Northern Finland and nearby regions are the growth engine of basic industry in Oulu. The most significant investments are intended for energy production and construction industry. Traditionally, the strong fields of industry in the Oulu region are forest, metal and chemical industries, wood processing and food industry. Large integrated pulp and paper mills operate in Oulu. There is a big steel mill in the nearby city of Raahe. Furthermore, the region is a leading production area for log houses and prefabricated homes.

Cleantech

Environmental technology, i.e. Cleantech, is one of the most rapidly growing industries on a global scale. The fast growth in the Cleantech sector is due to factors such as decreasing natural resources, shortage of water, climate change, as well as legislation and international agreements. Oulu has selected Cleantech as one of the most important areas to focus on.

Creative Industry

The diversity of the creative industries in Oulu ranges from architectural services and communications sector to design and adventure services. During the last few years online, mobile and SaaS services have started to emerge as new branches. Oulu is also one of the central clusters of the Finnish game industry.

Life Science in Oulu

The life science business and infrastructure are growing steadily in Oulu. There are about 540 companies in the health, wellness, bio, e-health and medical technology industries, and at least 240 of them are hi-tech companies. They all offer world-class expertise, address varied global needs and aim at expanding to international
markets, with an export turnover increasing by 32% in the past six years. The total revenue in this sector amounts to around EUR 700 million. In Oulu, there is world-class competence in the next generation technologies and the emerging bio-economy. Information and Communications Technology (ICT) expertise is utilized, for example, in the development of life science applications, such as wireless biosensors and med-tech devices. Additionally, the city boasts a unique OuluHealth ecosystem, which aims at accelerating innovation, delivering sustainable services to health companies, and providing better solutions for the citizens.

Trade, Services and Travel

The new underground car park Kivisydän (Stone Heart) stimulates investments and attracts new trade enterprises to Oulu city center. The increase in population and purchasing power combined with an active economic development creates a sustainable platform for the development of services and trade in the city.

Oulu is the 5th largest travel destination in Finland and the percentage of leisure travelers has already reached 60%. The new city plan enables investments of more than 100 million euros in hotels, along with a holiday village and amusement park in the Nallikari area. Other investments concerning the travel sector are targeted to Kuusamo, Syöte, Rokua Geopark, and Kalajoki.

Transport

Oulu’s location, right in the middle of Northern Europe’s developing market and its active business life, is excellent. Traffic and transport to and from Oulu works efficiently. Oulu Airport is the second busiest in Finland. This recently expanded and completely renewed airport serves one million passengers annually. The regular domestic and international flights of several airlines connect Oulu with the rest of
the world. A direct flight to Helsinki (Finnair, Norwegian) takes only 50 minutes. Altogether, Oulu Airport offers 15-20 flights daily and over 100 flights per week.

The Port of Oulu is one of the leading ports on the Bothnian Bay, and 500–600 ships visit Oulu annually. The port has regular connections to all over Europe. The most significant export product is paper, and the main import products are fuel and raw materials for the forest industry. The Port of Oulu is open all year round, and it is the biggest port in Northern Finland in terms of the amount of containers and unit traffic. The Port of Oulu includes three separate harbour areas: Vihreäsaari oil and bulk docks, Nuottasaari docks and Oritkari docks. Next to the Port of Oulu there is a northern multimodal transport centre, which serves the logistics centres of the Oulu region as well as road, railway and sea transportation.

Education and Research

Oulu is a research hub with a capital R: the local Technical Research Centre of Finland (VTT) is Northern Europe's largest organization involved in applied research. Research is also conducted at the University of Oulu, Oulu University of Applied Sciences and numerous research institutions, such as Finnish Food Safety Authority Evira, the Finnish Geodetic Institute (FGI), MTT Agrifood Research Finland, the Natural Resources Institute Finland LUKE, the Finnish Game and Fisheries Research Institute (FGFRI), and the Finnish Environment Institute SYKE.

Oulu University

The University of Oulu is an international science university which creates innovations for the future, wellness, and knowledge through research and education. Founded in 1958, the research and education community is 16 000 students and 3 000 employees strong, and one of the biggest and most multidisciplinary universities in Finland.
The research organizations of the focus and development areas are typically multidisciplinary, and they encourage researchers to make new scientific initiatives and discoveries. The University of Oulu conducts research in close cooperation with sector research institutions and corporations. Acting in the international scientific network is the foundation of renewal.

Oulu University of Applied Sciences

Oulu University of Applied Sciences has more than 30 programs in which theory and practice are in balance. The university has an active role in research, both internationally and regionally.
(Source: BusinessOulu)

5.2.1. Investments in Oulu Region up to 2030

Total amount of the investment plans in Oulu Region is 14,040 billion € and the biggest investments are located in the Northern Finland. Biggest single project is also in the region. Fennovoima Oy/Rosatom nuclear power plant project in Pyhäjoki is about 7,0 billion €. Realization of this project has been disputed many times during the last five years. Part of the reasons for the dispute has been due to the political reasons, because nuclear technology to this project is provided by the Russian Rosatom and the Ukraine and Crimean crisis have caused doubts about the safety of the project. Major newspaper of the region Kaleva made a survey regarding the position of people living in the area about Fennovoima project. As a result 62% of the local people are considering nuclear power plant project with Russian technology as a security problem. The project has also had problems with Radiation and the Nuclear Safety Authority STUK regarding some technical regulations.
Climate change has increased the popularity of nuclear power as a solution in cases, when fossil fuel or energy are replaced. According to the International Atomic Energy Agency, Nuclear power makes a significant contribution to reducing greenhouse gas emissions worldwide, while fulfilling at the same time the increasing energy demands of a growing world population and supporting global sustainable development. Nuclear power plants produce virtually no greenhouse gas emissions or air pollutants during their operation and only very low emission levels during their entire life cycle. As a result, the use of nuclear power avoids the emission of nearly 2 billion tons of carbon dioxide every year – the equivalent of taking over 400 million cars off the road per year. Based on these facts’ implementation of Fennovoima project is more probable than ever.

Oulu Region has a long and shallow coastline with the Gulf of Bothnia, which is an excellent location for wind mill parks. Coast is one of the main areas for Finnish wind power. This can also be seen in the size of the planned parks and the growing number of investment plans. Oulu Region has about 70 wind park projects with total value of 3,2 billion €.

Forest industry and bio power investments are also typical for the region. Stora Enso is planning the conversion of Oulu mill to a packaging board production with 350 million €. Oulun Energia Oy is starting to construct a new bio power plant with bio fuel production. Almost similar projects are also Scanchips Oy project in Sievi and biorefinery by Kanteleen Voima in Haapavesi.
5.2.2 List of Investments

Industry
Stora Enso Oulu Mill Conversion to Packaging Board 350 m€
SSAB Raahe Mill Blast Furnace Upgrade 35 m€
Total: 385 m€

Hydro Power
Pyhäsalmi Pump Power Plant 350 m€

Wind Power
All Wind Park Projects in the Region, 70 Wind Parks 3,2 bn€

Nuclear Power
Fennovoima Oy Nuclear Power Plant, Pyhäjoki 7,0 bn€

Bio Power
Oulun Energia Oy, New Power Plant, Bio Fuel Technology 200 m€
Scanships Oy, Biofuel Plant, Sievi 110 m€
Kanteleen Voima Oy, Biorefinery, Haapavesi 200 m€
Total: 510 m€

Energy Transfer Networks
Fingrid Oy Oulujoki Network 50 m€
Fingrid Oy Fennovoima Networks 50 m€
Total: 100 m€
Trade
Zatelliitti Shopping Center Expansion, Kempele 235 m€
Raksila Super Market Block, Oulu 115 m€
Raksila Station Zone Project, Oulu 225 m€
Raahenportti Mall, Raahe 80 m€
Total: 655 m€

Tourism
Rukakeskus Oy Ruka Valley 100 m€
Oulu Terwa Towe Hotel 100 m€
Nallikari Tourism Center Expansions, Hotel and Theme Parks 100 m€
Oulu City Market Place Hotel 30 m€
Oulu Airport Hotel 30 m€
Total: 360 m€

Transport infrastructure
Ylivieska-Kokkola Railway Double Track 310 m€
Ylivieska – Vartius Railway Electrification, Oulu Region Part 148 m€
Oulu and Ylivieska Railway Yards 46 m€
Hailuoto Bridge 76 m€
Total: 580 m€

Public investments
Oulu University Hospital 900 m€
All total: 14,040 bn€
Kainuu is located in the Oulu province and it borders the regions of Northern Ostrobothnia, North Karelia and Northern Savonia. In the East it also borders Russia. The region consists of eight municipalities and two cities. The administrative capital is Kajaani. Municipalities of Kainuu: Hyrynsalmi, Kuhmo, Kajaani, Paltamo, Puolanka, Ristijärvi, Sotkamo, Suomussalmi, Vaala and Vuolijoki.
The total population of the region is 84,350, Kajaani being the biggest city with nearly 38,000 inhabitants. Land area is 24,452 km\(^2\) and population density 3.51 km\(^2\).

The turnover of companies within the technology industry of Finland has continued its growth during 2006. The same trend exists in the region of Kainuu. Currently there are more than 2,300 people employed in the regions ICT and metal industries.

The future outlook for Kainuu is now better than for years. There are planned investments in the industry and the service sector worth up to two billion euros. If implemented, the investments would bring up to 3,800 new jobs in the region. Estimates about the future investments have been documented in the regional development picture submitted to the Ministry of Economic Affairs and the Employment. The ministry has gathered views from all 18 provinces.

“Kainuu has become a positive area through its structural change. Sure, we still have a problem of long-term unemployment and marginalization, but at the same time, labor supply in the region has become more difficult,” says Pentti Malinen, the provincial council. The future is based on traditional core industry of the region, but the new trend is, that all these sectors are facing investment opportunities. For example, 270 employees of a potential KaiCell biorefinery do not get directly from the current schooling system.

“It requires recruiting from the labor market and further training,” Malinen says.

In addition to the new investments, Kainuu is also expected to grow in the area of already existing industry. For example, Kuhmo Woodpolis Wood Products Industry will have 50-70 new jobs by 2020 and a 70-100 million increase in net sales. The leading wood expertise of Kuhmo, is Tuupala’s wooden school, which is being introduced this year. In its picture of the Ministry of Economic Affairs and Employment, the
Regional Council of Kainuu links the tourism industry, the technology industry, the bio economy and the sustainable mining industry to the core of their business. The Regional Council of Kainuu describes the supply of second-level education to be versatile. Special thanks are given to the high schools, which have focused on specific field.

The main routes for access to Kainuu are the connection to Kajaani, highway 5 and road 78 and Savo. According to the Ministry of Economic Affairs and the Employment report, the aim is to connect the Savo track along the Taivalkoski track to Lapland and the Arctic Ocean. Despite the positive direction, challenges are enough, especially in demographic development. At the end of 2016 there were 74 803 inhabitants in Kainuu, of whom only slightly more than half lived in Kajaani. Between 2010 and 2015, in sparsely populated rural areas, the population decreased by 20 % (5,712 people). The challenge is also the clarification of the provincial image. According to a recent image survey, Kainuu has generally a positive image, but the province is poorly known. Kainuu’s innovativeness and know-how are not sufficiently visible.

5.3.1. Investments in Kainuu Region up to 2030

The value of all the investment projects in Kainuu Region is 3,940 billion €. This amount consists two giant projects. Biggest is the huge data center in Sotkamo planned by the American Silent Partner Group. This company surprised Finland in the end of 2018 by plans to build 4 big 250 MW data centers to Hamina in South Finland and two centers to Sotkamo in Kainuu Region and one in Tornio Lapland. Even the Mayors of these two towns didn’t know anything about the projects. Soon, the management of the company confirmed projects and told, that The Silent Partner Group of Companies™ (SPGC™) is a global enterprise system of companies, with offices
in Florida, Texas, California, Pennsylvania, Bulgaria, Greece and soon to be in Norway. SPGC's subsidiaries include, Silent Partner International, Inc. (USA), Silent Partner International, Ltd. (Bulgaria), Power Systems Group International, LLC (USA), Level5 Data Center Group, LLC (USA) and Diversified Global Systems, LLC (USA), with the latest addition to be Power Systems Group Norway AS (Norway), which is currently under formation.

KaiCell Fibers company is planning 900 million € biorefinery investment to Paltamo. The investment decision is planned to be made later in 2019 and in 2023 the mill is ready for production. According to the company, the goal is to produce around half million tons of chemical pulp per year. Nearly a quarter of the production is used for further processing. KaiCell Fibers' aim is to sell market pulp 323,000 tons for the paper, tissue and cardboard industry. KaiCell Fibers own downstream product is ecological textile fiber Arbron™. The estimated production volume of textile fiber is about 100,000 tons per year. In addition to the main products, the company sells by-products to partners, who develop bioproducts at the Paltamo mill site in the upcoming BioFutureFactory™. KaiCell Fibers has Chinese partner, state owned CHTC, which has main focus in textile industry. Agreement regarding the site of the mill has been signed with Paltamo municipality. Important Environment Impact Assessment is also in process. Kainuu Region has also strong mining sector. Long awaited Sotkamo Silver mine was opened in the beginning of 2019 in Taivaljärvi. Once problematic Talvivaara mine, now Terrafame Oy has succeeded in balancing the nickel production and turns back to profitable business. Terrafame has also decided to open the battery chemicals plant. The plant, which will produce chemicals used in electric vehicle batteries (EVB), will be located at the company’s current industrial site in Sotkamo, Finland. Terrafame has already entered into major technology agreements with key equipment suppliers.
The demand for electric vehicles has been growing rapidly, which is reflected in the manufacturing and development of batteries. The size of batteries used in electric and hybrid vehicles grows along with the operational demands of cars, and the share of nickel in lithium batteries increases. A significant share of Terrafame’s nickel and cobalt sulphate production is already being allocated to manufacturing EVB chemicals, although the further processing into chemicals is currently done outside of Terrafame.

### 5.3.2 List of Investments

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry</strong></td>
<td></td>
</tr>
<tr>
<td>KaiCELL Fibers, Bioproduct Plant, Paltamo</td>
<td>900 m€</td>
</tr>
<tr>
<td>ST1/North European Biotech Oy Expansion</td>
<td>60 m€</td>
</tr>
<tr>
<td>Data Center Kajaani</td>
<td>35 m€</td>
</tr>
<tr>
<td>Silent Partner Group Sotkamo Data Centers</td>
<td>1,300 bn€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>2,295 bn€</strong></td>
</tr>
<tr>
<td><strong>Mining industry</strong></td>
<td></td>
</tr>
<tr>
<td>Terrafame Oy, Sotkamo, Uranium, Cobalt and Battery Production</td>
<td>185 m€</td>
</tr>
<tr>
<td>Otanmäki Mine Oy Mine Reopening</td>
<td>200 m€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>385 m€</strong></td>
</tr>
<tr>
<td><strong>Wind Power</strong></td>
<td></td>
</tr>
<tr>
<td>Hyrynsalmi Wind Parks</td>
<td>150 m€</td>
</tr>
<tr>
<td>Vaala Wind Park</td>
<td>198 m€</td>
</tr>
<tr>
<td>Paltamo Wind Park</td>
<td>132 m€</td>
</tr>
<tr>
<td>Kajaani Wind Parks</td>
<td>300 m€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>780 m€</strong></td>
</tr>
</tbody>
</table>
Tourism
Vuokatti East Resort, Sotkamo  120 m€
Other Tourism Projects  60 m€
**Total:**  180 m€

Transport infrastructure
Regional Railroad and Road Projects  150 m€

Public investments
Central Hospital, Kajaani  150 m€
**All total:**  3,790 bn€
Norrbotten County (Norrbottens län) is a county in the North of Sweden. It borders to Västerbotten County and the Gulf of Bothnia. It also borders the counties of Nordland and Troms in Norway, and Lapland Province in Finland.
Norrbotten has some 249,436 inhabitants, which represents three per cent of Sweden’s population. Reindeer husbandry and the Sami culture are couple of thousand years old. The mountain area in Norrbotten, which is part of the Scandinavian mountain chain, is a near 100 km wide zone running from North to South.

The county railway network, both in a north-south direction and to Finland and further on eastwards is a vital link, both for goods traffic and passenger traffic. The Ore Railway between Luleå and Narvik in Northern Norway is one of the country’s most important goods routes. Half Sweden’s tonnage of railway freight is transported from Kiruna to Riksgränsen and on to Narvik in Norway.

In Norrbotten County there are five airports with scheduled flights: Luleå Airport, the fifth busiest in Sweden, Arvidsjaur, Gällivare, Kiruna and Pajala. The county is crossed by a national road network, which links to Norway and Finland.

The roads in Norrbotten are important also to link together this vast county. Nine per cent of Sweden’s road network is in Norrbotten County, a region where the rate of car ownership is among the highest in Sweden.

The harbour in Luleå is Sweden’s leading bulk goods terminal. An effective ice-breaker service enables the ports of Piteå and Luleå to remain open all year round for the intensive shipping. The harbour in Kalix also has year-round shipping, although on a smaller scale than Luleå and Piteå.

Luleå University of Technology is Scandinavia’s northernmost technical university, with world-class research and education. The university today has more than 19,000 students, 1,700 employees, and an annual turnover of more than 1,600 million SEK.

(Source: Facts about Norrbotten, Länstyrelsen i Norrbottens Län)
The position in Norrbotten is still strong, but the picture varies between the industries. The construction sector signals a significantly weaker position than other sectors, and also compared to other Nordic countries. Retail and service companies, instead, strengthened their assessments to a level close to a very strong position. Manufacturing industry also indicates that it is close to a very strong position, despite the fact that the industry declines relatively sharply from the record position stated in the previous survey.

Manufacturing companies reported above all more negative estimates of the size of the finished warehouse compared with the previous measurement. However, despite a slight weakening, the size of the order book is still positive. The expectations of production volumes are still positive although they have weakened slightly since the last measurement. The relatively negative opinion of the construction sector is due to weak assessments of the order book and the continuing problems of finding skilled labor. Both the private service industries and the retail sector thus indicate a strengthened position. The merchants are particularly positive about the volume of sales developed in the previous period, while the position of service companies is primarily driven by positive expectations of demand in the future.

Source:
5.4.1. Investments in Norrbotten up to 2030

City of Luleå, the capital of Norrbotten County is the world-famous location of the Facebook Data Centers. Facebook opened its first center in 2013 in Luleå and second one in 2014. Now the company is starting a project to build the third center in the same neighborhood. Center no 3 is going to be almost 100000 square meters and it costs about 400 m€. In 2021 it comes online, according to the plans. Norrbotten has now 18 data centers and more is to come in the future.

Mining is the most powerful branch of business’ in Norrbotten. Total value of all planned mining investments is more than 5 billion €. Mining has more than one hundred years of tradition in the county. However, now some mining projects are controversial, because they are located in the High North and Sami communities are protesting of the harms caused by mining for reindeer herding. On the other hand, some mining projects have better reputation in producing metals for electric car batteries, which are important in the fight against climate change.

Norrbotten has also had big investment plans regarding wind parks. Biggest is Markbygden in Piteå about 100 km from the Gulf of Bothnia coastline. Project started well and by the end of 2018 the area produced more than 300 MW electricity. Now, the Swedish company Swewind is building 179 new windmills to Markbygden. When all planned wind parks are ready, total amount of the windmills is going to be 1101.

Existing big mining industry needs good transport infrastructure. The government of Sweden wants to develop especially the railway transport in the whole country including the High North. The core of the Norbotten railway system has been more than hundred years the so called Malmbanan railway, which has been in the use of the
mining giant LKAB company from Kiruna to port of Narvik in Norway. It also serves as a connection between Kiruna mines and the port of Luleå. Company has had as a plan for some years now to build a double-track railway from Kiruna to Narvik. So far, that has not been included to the National Transport plan of Sweden, but now planning of the Swedish side of the double-track is about to begin.

Number one railway project is the Norrbotniabanan. Swedish Government has decided to start the implantation of this plan. This new 270 km railway will cost about 3,2 billion € in total and the construction of it is starting from Umeå and Norrbotten part of this railway is expected to be built after 2025 and it is ready in the first half of 2030’s.

Also, the so called Inlandsbanan railway has come to the investment’s agenda. This railway is between Gällivare Norrbotten and Kristinehamn Värmland. This, about 1288 km railway was built in early 1930’s and it was ready in 1937. Main transport has been raw materials to industry, mainly timber and industrial products to Southern Sweden. Now, the most important traffic is in summer time, when it serves the passenger traffic. The future of this railway is today promising, because the Australian company Macquarie Group is interested to reconstruct the track as a new supporting railway to industry and it is also shortest direction from Oslo Norway to Narvik. It might also become important transport route for Norwegian fish export. About 20 million tons in year of fish export is coming from Norwegian counties Nordland and Troms and this reconstructed railway is the shortest way to export the fish to the Central Europe.
Most interesting of the investment plans in Norrbotten is the Hybrit project pilot factory by SSAB, LKAB and Vattenfall. Hybrit is the name of the fossil-free steel initiative. For the first time in 1,000 years, there is an opportunity for a technology shift and, as early as this spring, a globally-unique pilot plant for fossil-free steel is being planned for Northern Sweden, tells Vattenfall on its company webpages.

The aim is to have a totally fossil-free process for steel production by 2035. The pre-feasibility study includes calculations and the potential in due course to be able to commercialize fossil-free steel. The conclusion is, that the fossil-free steel, given today’s price of electricity, coal and carbon dioxide emissions, would be 20-30 percent more expensive. With declining prices in electricity from fossil-free sources and increasing costs for carbon dioxide emissions through the European Union Emissions Trading System (ETS), the pre-feasibility study considers, that the fossil-free steel will in future be able to compete in the market with traditional steel.

5.4.2 List of Investments

<table>
<thead>
<tr>
<th>Industry</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook Luleå Data Center 3</td>
<td>400 m€</td>
</tr>
<tr>
<td>NxTVn/Macquarie Group Boden Digital Industry Zone</td>
<td>100 m€</td>
</tr>
<tr>
<td>SSAB Luleå Hybrit -Project Pilot Factory</td>
<td>140 m€</td>
</tr>
<tr>
<td>Arctic Arc Arjeplog Indoors Provig Ground</td>
<td>100 m€</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>740 m€</strong></td>
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### Mining industry

<table>
<thead>
<tr>
<th>Mine Name</th>
<th>Value</th>
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<tbody>
<tr>
<td>Boliden Aitik, Liikavaara Copper Deposit</td>
<td>150 m€</td>
</tr>
<tr>
<td>Talga Resources Vittangi Graphite Mine</td>
<td>300 m€</td>
</tr>
<tr>
<td>Hannans Reward, Rakkurijoki Iron Mine</td>
<td>400 m€</td>
</tr>
<tr>
<td>Hannans Reward, Lannavaara Iron Mine</td>
<td>500 m€</td>
</tr>
<tr>
<td>Hannans Reward, Pahtohavare Gold-Copper Mine</td>
<td>300 m€</td>
</tr>
<tr>
<td>Jokkmokk Iron Mines AB, Kallak Iron Mine</td>
<td>500 m€</td>
</tr>
<tr>
<td>Boliden AB, Laver Copper Mine</td>
<td>1,0 bn€</td>
</tr>
<tr>
<td>LKAB Kiruna, Next Projects up to 2030</td>
<td>1,9 bn€</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>5,050 bn€</strong></td>
</tr>
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### Wind power

<table>
<thead>
<tr>
<th>Power Plant Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vattenfall Storlandet Gällivare/Boden</td>
<td>480 m€</td>
</tr>
<tr>
<td>Svevind Piteå</td>
<td>800 m€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1,280 bn€</strong></td>
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</table>

### Energy Transfer Networks

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Svenska Kraftnät Norrbotten</td>
<td>215 m€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>215 m€</strong></td>
</tr>
</tbody>
</table>

### Tourism

<table>
<thead>
<tr>
<th>Resort Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Svanstein Resort, Pullinki</td>
<td>20 m€</td>
</tr>
<tr>
<td>Small Tourism Investments</td>
<td>15 m€</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>35 m€</strong></td>
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</table>
**Transport infrastructure**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost (m€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norrbotniaban Railway Skellefteå – Luleå</td>
<td>1,6</td>
</tr>
<tr>
<td>Kiruna/Peuravaara – Norwegian Border Railway</td>
<td>1,3</td>
</tr>
<tr>
<td><strong>Double Track</strong></td>
<td></td>
</tr>
<tr>
<td>Luleå – Riksgränsen Railway ERTMS Signal System</td>
<td>265</td>
</tr>
<tr>
<td>Gällivare – Narvik Railway Transport Control System</td>
<td>45</td>
</tr>
<tr>
<td>Macquarie Group/Inlandsbanan Railway</td>
<td>40</td>
</tr>
<tr>
<td>Project Norrbotten</td>
<td></td>
</tr>
<tr>
<td>Norrbotten Region Transport Plan Investment Projects</td>
<td>80</td>
</tr>
<tr>
<td>E10 Luleå – Kiruna Highway</td>
<td>180</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>3,510</strong></td>
</tr>
<tr>
<td><strong>All total:</strong></td>
<td><strong>10,830</strong></td>
</tr>
</tbody>
</table>
Västerbotten has a population of around 210 000 where 80% live along the coast and the remaining live in the sparsely populated interior and mountain areas. One can say that 70% of the population is concentrated to 20% of the total area. The population in the interior is concentrated to the chief city in each municipality and it has decreased significantly over the past 20 years. In sharp contrast, Umeå has been one of the most dynamic cities in Sweden with a population growth of 27% during the period of 1980-97. The other coastal municipalities have decreased in population.
Västerbotten is a productive region with strong and diverse business sectors. It is at the forefront of R&D, has abundant natural resources and is an attractive location as a gateway to Northern Scandinavia and the Barents region. Companies locating in Västerbotten benefit from a strong entrepreneurial tradition, competitive costs for personnel, operations and facilities, an excellent infrastructure and a reliable, well-educated work force. The region offers readily available land and premises at affordable costs. Companies establishing businesses in Västerbotten may also apply for financial and employment incentives from the government.

Västerbotten has experienced one of the highest GDP growth-rate of all Swedish provinces for the last six years, with an increase of 48% compared to the national average of 40%. A strong industrial culture, based on forestry, mining and pulp and paper, is making way for new high-tech industries, creative companies and a high-productivity manufacturing and processing sector. Since the region hosts most of Sweden’s energy resources, there is also an active development of eco-friendly power and heating solutions. Västerbotten has a collaborative spirit with many established networks and consortiums, business incubators and cross border research and development.

The region has three universities, Umeå University, including the world known Umeå Institute of Design, Luleå University of Technology and the Swedish University of Agricultural Sciences. The universities all offer inspiring environments for students, researchers and scientists, whom are world leaders in many fields. The region’s universities are constantly evolving and improving through regional, national and international cooperation with trade and industry, research institutes and authorities.

The region’s well-developed infrastructure with seven airports, deep sea ports, railroad communications, trucking service and an excellent road network with three European highways make it easy to travel and carry freight. Västerbotten also has a world-renowned
development of both mobile and fiber-based broadband, and an extensive GSM and 3G network coverage. For example, Umeå has the fastest broadband connection in Europe.

(Source: Västerbotten Investment Agency)

5.5.1. Investments in Västerbotten County up to 2030

Huge Skellefteå battery factory is one of the biggest investment projects in the European High North. Total investment is about 2.9 billion € and it is going to be made by Swedish company Northvolt. CEO Mr. Peter Carlsson has a background in Tesla, as if also a couple of his colleagues have. Original plan of Northvolt was to have a factory with annual cell production about 8 GWh, but now, the target is to get capacity raised to 32 GWh in 2023. So, it would be almost as big as the planned Tesla Gigafactory in Nevada desert.

According to Northvolt, the European market in 2025 is at least 200 GWh, which means from five to seven gigafactories. To keep up such a production, a sufficient electricity supply from renewable energies, most likely hydro power should be close enough to factory. To be prepared to this development Northvolt has together with VW Group formed consortium named European Battery Union (EBU), which includes partners from research and industry from seven EU member states.

The new Swedish Government is strongly increasing input to railway transport in the coming years. Västerbotten County is a good example of this development. Government decided to start the implementation of whole Norrbothniaban railway project from Umeå Västerbotten to Luleå Norrbotten. First part from Umeå to Skellefteå should be ready in 2029 and it costs about 1.5 billion €.
Sweden has also another railway called Inlandsbanan from Gällivare Norrbotten to Kristinehamn Värmland. This, about 1288 km railway was built in the early 1930’s and it was ready in 1937. Main transport on the railway has been raw materials to industry, mainly timber and industrial products to Southern Sweden. Now, the most important traffic is in summer time passenger trains. The future of this railway is promising, because Australian company Macquarie Group is interested to reconstruct the track for new supporting railway to industry and it is also shortest direction from Oslo Norway to Narvik.

Sweden is powerfully increasing the use of renewable energy. Wind power has been booming and in Västerbotten investment in six wind power parks is 1,3 billion €. Most of these are in Storuman area, which is sparsely populated area about 200 km from Umeå.

### 5.5.2 List of Investments

**Industry**

- Northvolt Battery Factory, Skellefteå 2,9 bn€
- Total: 2,9 bn€

**Mining industry**

- Dragon Mining Fäboliden Gold Mine 25 m€
- Agnico Eagle Barsele Gold Mine 300 m€
- Tertiary Minerals Högland Fluorspar 30 m€
- Archelon Rönnbäcken Nickel Mine 550 m€
- Total: 905 m€
Wind power

Vattenfall Blakliden/Fäboberget Windparks 335 m€
Fred Olsen Renewables Verkanliden Windpark 100 m€
Triventus Långsjöby Windpark 50 m€
Vattenfall Juktan Windpark 30 m€
Vattenfall Sandselehöjdarna Windpark 290 m€
GHG Wind Gråtanliden Windpark 500 m€

Total: 1,305 bn€

Energy Transfer Networks

Vattenfall Sorsele/Vilhelmina/Storuman 1,9 bn€

Total: 1,9 bn€

Tourism

Hemavan Vision 2025 165 m€
Tärnaby/Kittelfjäll 25 m€

Total: 190 m€

Transport infrastructure

Norrbotniaban Railway Umeå-Skellefteå 1,5 bn€
Macquarie Group/Inlandsbanan Railway 40 m€
Project Västerbotten
Västerbotten Region Transportplan 100 m€
Investment Projects
Umeå Road Project E4/E12 Finalizing 50 m€

Total: 1,690 bn€

All total: 8,890 bn€
The Norwegian High North consists of three counties: Finnmark, Troms and Nordland. Population of Finnmark is 75,207 and the total land area is 48,618 square kilometres. Most of the population live along the coast. However, the indigenous people (Sami), about 10% of the population - have a special status with its institutions and live mainly in the inland. 5% of the population in Finnmark is of recent foreign origin and mainly from Russia and Finland. The Sami people constitute the majority in Finnmark’s interior parts, while the fjord areas have been ethnically mixed for a long time. The Finnic Kven
residents of Finnmark are largely descendants of Finnish immigrants who arrived in the area during the 19th century or before from Finland, suffering from famine and war.

(Source: Finnmark.no, Hammerfet Kommune, Kirkenes nærighage)

The consumption of northern Norway households has been reduced since the end of 2016. The impressive sales increase in retail trade from 2015 and 2016 is now normalized and is at the same level nationally. Household income increased more in northern Norway than in the rest of the country during the period 2013-2015. In 2016, they increased by 7.8 per cent (measured through tax revenues to the municipalities), and then somewhat lower than on a national basis.

Throughout the recession, employment growth was higher in northern Norway than nationally, but now the potential for further growth is less. It is simply too few people to take off, while unemployment cannot be much lower.

Investments

Investment growth in northern Norway was strong in 2016 and continued into 2017, primarily due to the high start-up of new housing projects. A number of projects are running far into 2018, but according to Norway’s statistic, the construction industry’s building orders are not the way as they have been.

In the construction industry, where road construction and other infrastructure control the activities, the situation is not as bad. Here the investments are in the making, and an ambitious national transport plan ensures that growth continues at the same level in the next few years.
In Nordland, several water and wind power developments are being planned. Energy companies Fortum and Nordkraft have entered into major agreements for further wind power in the Ofoten and Vesterålen, and Eolus Vind Norge AS has been licensed to construct Øyfjellet wind power plant at Mosjøen.

The supplier industry in northern Norway is still struggling, but according to the analysis of “Levert”, better times are expected next year. In the oil and gas sector, it is actively working with development solutions for the Johan Castberg field in the Barents Sea.

**Export**

North-Norwegian exporters benefit from favorable price developments on their goods. The value of North-Norwegian exports was 9 percent higher in the first eight months of the year than in the same period last year. This is mostly about good price development and less about volume growth. Overall, KB (Konjunktbarometer) believes in a North-Norwegian export growth of 2.5 per cent this year, measured at constant prices.

**Seafood**

The value of seafood exports from northern Norway increased by 22.5 per cent in 2016. In the first 8 months of the year, growth has continued, but only by 6 per cent. The industry still benefits from high prices for farmed salmon and fresh whitefish, but the price trend for salmon points downwards.

By 2019, we cannot expect a particular change in the seafood volumes from northern Norway. At the same time, somewhat higher economic growth, both in Europe and globally, will push prices up. Thus, it is likely that the value of the seafood export might also experience zero growth in 2019.
Tourism

Tourism industry in Northern Norway is growing rapidly. Expect in 2013, when there was a slight downturn. The number of overnight stays has risen by way over 10 percent each year. This is even higher number compared to the national basis. In 2016, the number of overnight stays increased by 21 per cent for foreigners. Last year's growth in northern Norway was nothing but impressive and ended 11 percentage points higher than on a national basis. Especially in Troms, growth is strong, with 3 times as many overnight stays as 10 years ago. The boom in tourism is largely attributable to the increased winter tourism and experiences with the northern lights.

Metals

Northern Norway exported metals, chemical products and processed goods to almost NOK 12 billion in 2016. The export has decreased from the previous year, due to a fall in export goods prices, average decreasing rate 8 percent. The fact that Chinese suppliers have come to the market are pushing down profitability.

According to Index Nordland, metal producers are on their capacity limit, and as the industry is growing, investment must increase as well. In summary, this indicates that industry capacity will increase over the next few years, and KB estimates a 2 per cent increase per year over the next 2 years, where almost all exports are exported.

Mineral industry

The mineral industry's contribution to the North-Norwegian economy has been on a declining front in recent years. Employment figures for 2016 show a decline of 3 percent. But there are also some optimistic news on this field as well.
In 2016, Elkem received approval for quartz recovery in Nasafjell in Rana municipality. Nasafjell is considered to be one of Northern Europe’s largest and most important quarters, estimated to be 10 times larger than other known instances in Norway. Elkem is considering using a part of this quarter for the production of silicon products at Elkem Salten in Sørfold.

One year after the bankruptcy in Sydvaranger Mine, the mines are opened again. After several months of maintenance of the equipment in the mine, owner Felix Tschudi announces that the company is now rebooting with limited operation.

**Public sector**

The state budget for 2018 contains several good news for northern Norway. The Government proposes reintroducing the differentiated employer’s fee for transport and energy companies. We will build roads for 3.1 billion in the region, and a new center for ocean and arctic issues has been proposed to be created in Tromsø. The government also announces efforts to increase the presence of the defense in the north, with the establishment of a company at the Garrison in southern Varanger, the acquisition of combat air defense to the army and the start of building Evenes as the base for maritime patrol aircraft and operation base for F-35 combat aircraft.

Low population growth and opportunities for reduction in government transfers may lead to the public sector becoming less important in northern Norway in the future.

*Source:*

5.6.1. Investments in North Norway up to 2030

Northern Norway consists from three counties, which are Finnmark, Troms and Nordland. Nordland is the most industrialized of these counties, when having aluminium production and mines with strong fishing industry. Troms is the center of tourism and trade and has also significant fish production. Finnmark and especially its western part is the center of Barents Sea oil and gas. Eastern part of the county has mining industry, ship repairing industry and it is in the neighborhood of Russian Murmansk Region. In 2020 Finnmark and Troms will be combined to the northernmost county of Norway and the new name of this is Finnmark-Troms.

Oil and gas are the biggest single branch of business’ in the North Norway. Global debate regarding the future of oil and gas production especially in the Barents Sea is actual in Norway and we have seen some action in decreasing the future expectations regarding the new investments. According to Reuters, based on a survey by Norway’s statistics agency SSB, oil and gas companies working in Norway have lowered their investment forecasts for 2019 to 172.7 billion crowns ($20.1 billion) from 175.3 billion crowns seen in November. In 2020 investments are expected to fall to 158.5 billion crowns, according to the initial forecasts, though the forecasts could be revised upwards in the months to come, it added. However, several plans for development and operation are expected to be submitted to the government in both 2019 and 2020 the agency said in a statement. If the schedules for these plans are realized, the accumulated investment costs in 2020 from these projects will increase the investment in the field development compared to the present estimate.

There already exists three ongoing oil and gas producing units in Norwegian High North. First one is the Snow White LNG- production in Hammerfest and number two is the Goliat oil field by ENI Norge also
in Hammerfest. Now, also Aasta Hansteen gas field is in production in the southern part of Nordland county. Next one might be Johan Castberg oil field with Veidnes oil terminal by Equinor (former Statoil). The start of this 5 billion € project is expected to happen even within next months. The profitability of this project is guaranteed by the oil price over 45 USD/ barrel and the price has been over 70 USD.

Norwegian oil and gas industry evaluate the investment potential in the Barents Sea to be more than 70 billion€, but it is very difficult to define, which are the next implemented projects after Johan Castberg. However, its looks like two projects could be possible to be implemented Alta/Gohta oil Field by Swedish Lundin Petroleum and Wisting Oilfield by Austrian OMV Norge AS.

Norway’s government has also decided, that Norway’s sovereign wealth fund, largest in the world, thanks to thre petrodollars, will sell off stakes in oil and gas exploration and production companies to reduce its exposure to oil. Government defined, that the question was about exploration and production companies, with no plans to sell broadly diversified energy sector. Norwegian government is also renewing the Development Strategy of Northern Regions in 2020. It is going to show, if the development and the driving force of business in the High North is still exploration and production of fossil fuels.

Norway has for a long time attracted Finnish business community, but nothing big results has been achieved, so far. But now, Finnish Petroleum and Service stations company ST1 Norge AS is planning to construct a big wind power park to Finnmark near border between Norway and Finland. Electricity from this 900 million € project is intended to lead to Finland.

Growing tourism in Northern Norway is leading into bigger hotel investments as usual. Two big hotel projects are interesting. Both are in Nordland and the projects are extraordinary. Fauske Tower Hotel is planned to a little town of Fauske near Bodø. One significant
reason for the location is the road to Sweden, which is going through the town. Tower Hotel has 24 floors and it is 76 meters high and has 240 hotel rooms. Hotel is planned by Snöhetta architectural studio and is going to be a huge landmark, when it is ready. Snöhetta has also planned the second project called Svartisen in Glomfjord. It is coming in the neighborhood of National park and will be constructed totally on water.

Norway is investing strongly in northern transport infrastructure with four new big airports to Bodø, Hammerfest, Mo I Rana and Gimsøy. Biggest single infrastructure project is the Norwegian side of the Malmabanann railway double-track project. Road construction project investments are about 2,8 billion €. Other public investments like new hospitals, schools and other projects are huge, 8,2 billion € and they are possible to execute, thanks to the Norwegian strong regional policy.

5.6.2 List of Investments

**Industry**

- Fishing Industry Investments 700 m€
- Other Industry 400 m€
- **Total:** 1,100 bn€

**Oil and gas**

- Equinor ASA, Johan Castberg Oil Field 5,2 bn €
- Equinor ASA, Veidnes Oil Terminal 315 m€
- Lundin Petroleum, Alta/Gohta Oil Field 3,1 bn€
- OMV Norge AS Wisting Oil Field 4,0 bn€
- Oil and Gas Exploration Barents Sea till 2030 3,6 bn€
- **Total:** 16,215 bn€
**Mining industry**

Nussir ASA, Kvalsund Copper Mine 150 m€
Kirkenes Gruva, Reopening 200 m€
**Total:** 350 m€

**Hydro power**

North Norway Projects 425 m€

**Wind power**

ST1 Norge AS, Davvi/Borealis Wind Parks 900 m€
Finnmark other Projects 1,5 bn€
Troms Projects 1,3 bn€
Nordland Projects 1,2 bn€
**Total:** 4,900 bn€

**Energy transfer networks**

East Finnmark Network 1,7 bn€
Nordland-Hammerfest Network 1,0 bn€
**Total** 2,700 bn€

**Trade**

Shopping Centers 300 m€

**Tourism**

Fauske Tower Hotel 100 m€
Svartisen Nordland Snøhetta Hotel 150 m€
Målselv Fjellandsby Ski Center 100 m€
Other Hotel and Resort Projects 100 m€
**Total:** 450 m€
Transport infrastructure

Bodø New Airport 520 m€
Mo i Rana New Airport 225 m€
Tromsø Airport New Terminal 55 m€
Kirkenes Airport Runway Extension 10 m€
Lakselv Airport Terminal Extension 5 m€
Evenes Airport New Terminal 10 m€
Hammerfest Grøtnes New Airport 150 m€
Lofoten Gimsøy New airport 150 m€
Roads, Corridor 8, E6, E8, E10 2.8 bn€
Railway, Nordland 90 m€
Railway Narvik-Riksgränsen Double Track 1.2 bn€
Fishing Ports, Terminals 210 m€

Total: 5,425 bn€

Public investments

Hospitals, Schools, etc. 8,200 bn€

Total all 40,065 bn€
5.7 MURMANSK Region
As of early 2012, the Region includes 12 urban okrugs (Murmansk is the regional capital), 5 municipal districts and 23 settlements, 13 of them urban and 10 of them rural.

Population of the Region has decreased in 20 years from 1.2 million inhabitants to less than 800,000 inhabitants. People have moved back to their home regions or to cities like St. Petersburg and Moscow. The population density is 5.4 / sq. km. Population has concentrated in cities where live almost 93% of the inhabitants. Rural areas have only 7% of population. Nationalities are (2002): Russians are the majority in Murmansk Region with 85%, Ukrainians 6.4% and other nationalities 8.4% are minority. Sami people are living in Lovozero area and total population of Sami is less than 2000 people.

Murmansk Region is situated in the North-West of European Russia and it is one of the strategic areas of the country in the North-Western Federal District. The Region borders with the Republic of Karelia in the south-west and with Finland and Norway in the west and north-west. The Murmansk Region is one of the few Russian regions to share the border with the European Union and NATO countries.

The strategic importance of the Murmansk Region is based on enormous raw material resources and also military political importance. The Region is the base for Northern Navy ensuring defense capacity of the northern frontier. Headquarters of the Navy is located in Severomorsk about 20 km north of Murmansk.

Murmansk port is open all year round and it is the biggest Russian port situated to the north of the Arctic Circle. The products of Kola Peninsula mining industry are shipped to the world market from Murmansk. Nuclear icebreakers have ensured year-round Arctic navigation.
The Region occupies an important geopolitical position in relation to regions with a developed industry connected to it with land, sea and air routes. The location close to the border, significant exporting capabilities and available transport links establish good conditions for enhanced cooperation with other countries. The Murmansk Region is an active member of the international Barents Euro-Arctic cooperation.

**Business community**

Mining industry is the backbone of Kola Peninsula economy. In the Murmansk Region, there are over 60 large deposits of various raw minerals where 30 types of useful minerals are extracted. Most deposits of the minerals are of national significance, and of international significance as far as apatite, nepheline and cyanide ores and rare metals are concerned.

The economic specialization of the region includes extraction and processing of ferrous and nonferrous metal ores, industrial production of copper, nickel, cobalt, semi-fabricated precious metals products, primary aluminum and apatite concentrate that is a raw product for phosphate fertilisers.

The share of the Kola land of the total Russian production is 45% in nickel, 11 % iron-ore concentrate and 7% of refined copper. The Region is the only producer of apatite, nepheline and baddeleyite concentrates (100% are produced in the Murmansk Region).
Main industrial companies

JSC “Kolskaya GMK” is a single complex for extraction of sulphide copper and JSC ores and production of precious metals. Company is a division of Norilsk Nickel located in the Murmansk Region. Most important mines of Kola GMK are in Zapoljarnyi, Pechenga area and smelters in Nikel and in Monchegorsk, which is the headquarters of the company.

JSC “Apatit” extracts and processes apatite and nepheline ores of the Khibiny deposits which are part of the largest and richest deposits in the world as well as the basis of phosphorous raw materials in Russia. JSC Apatit is part of Fosagro company.

JSC “SZFK (North West Phosphorous Company)” is new industrial company in the Murmansk Region. It opened the first mine in Rutshij Olenij near the town of Kirovsk two years ago. The company belongs to Akron group.

JSC “Kovdorsky GOK” develops the Kovdor deposit and produces iron-ore, apatite and baddeleyite concentrates. It is part of EuroChem company. Kovdor is near Finnish border and the company has been interested about the Sokli mine deposit on Finnish side only 54 km from the town of Kovdor.

JSC “Olkon” extracts banded iron formations and sells high-quality iron-ore concentrate. It is a part of Severstal company which is the second biggest steel company in the world.

“KAZ-RUSAL”, a branch of United Company RUSAL, the biggest aluminium company in the world. KAZ smelts aluminium from aluminium oxide delivered there. The smelter and the plant are in the town of Kandalaksha.
5.7.1. Investments in Murmansk Region up to 2030

Murmansk has made a comeback to the Arctic cooperation, while its contender Arkhangelsk seems to be left behind. Last time Murmansk was on the top about 10-15 years ago, when Shtokmanovskoje gas field was on the agenda with Shtokman Development Company and its shareholders Gazprom, Statoil and Total. After delaying Shtokman project far to the future Arkhangelsk took the lead with International Arctic Forums organized by Russian Geographic Society and new promising Chinese business partners. Then, about five years ago Novatek started to use the commercial sea port of Murmansk as a base for shipments to Yamal LNG-project, when the port of Sabetta was opened for traffic. In Arkhangelsk, the Arctic Forum became bigger and needed better venue and facilities. New company Nord-Expo LLC was established and it started to construct new 3500 sq. meters Exhibition Centre, which should have been ready in 2019 before the new Arctic Forum. The organizers of the forum announced that 2019 forum was relocated to St, Petersburg, due to the better congress center, which was located there.

Novatek is also big investor in the Murmansk Region. It has two main projects going on in the Kola Bay area. In Belokamenka, on the western side of the Kola Bay, the company’s plant for the LNG platforms is under construction. To Kola Shipyard will be built in to so-called gravity-based structures (GBS), which can be towed to the shallow Arctic waters and used as production platforms. The shipyard is planned to be ready before 2020 and total value of the investment is 1,6 billion€.
Novatek has also started a project to build an LNG-terminal to Ura Guba in Kola Bay, about 50 km north from Murmansk. The Federal Government of Russia has accepted the project investment plan and this 1 billion € terminal is ready for operations in 2023. The capacity of this LNG terminal is 20 million tons. This terminal enables Novatek to cut costs for the transportation of the liquified natural gas. The ice-protected Arc7 tankers, that today shuttle to and from Sabetta, are too expensive to operate in open waters. Conventional tankers will pick up the natural gas from the terminal and deliver it to the customers all over the world.

Mining companies are also investing in the Murmansk Region. Main investors have already production in Kola Peninsula and the projects are expansions or upgrading of mining technology. It should be also noted, that international companies are planning to invest to the mining projects in the region. Fedorovo Trundra platinium project has made comeback to the official investment list. Main operator is Fedorovo Resources together with the Canadian Barrick Gold Corporation.

Murmansk seems to be a winner also in the competition of transport in the Northern Sea Route. Novatek shipments to Sabetta have increased the transport in Murmansk Commercial Sea Port from about 25 million tons to about 60 million tons. Murmansk Transport Hub has been the main project in the region. It is at the moment behind of schedule, but the best visible sign of the progress of construction can be seen north from the town of Murmashi, where the new railway bridge over Kola Bay is about to be completed. Regional Government is planning to upgrade the project and this probably is happening in the near future, when the new acting Governor Andrey Chibis is elected to Governor of Murmansk Region in autumn 2019. It is also interesting to see, if the upgraded transport hub has more international connections like possible railway from Alakurtti to Salla. This came up in Murmansshelf logistics conference in April 2019.
5.7.2 List of Investments

**Industry**
- Novatek/Yamal LNG2, Ship Building Plant, Belokamenka, Murmansk: 1,6 bn€
- Rosneft Supply Base, Rosljakov, Murmansk: 400 m€
- Fishing Farming Investments: 100 m€
**Total:** 2,100 bn€

**Mining industry**
- JSC SZFK/Akron Ore-Dressing and Processing Mill, Kirovsk: 550 m€
- Fedorovo Resources/Barrick Gold Corporation: 650 m€
- Platinum Mine and Mill: 65 m€
- JSC Apatit Reconstruction Anof 3: 470 m€
- Norilsk Nickel Kola MMC Reconstruction of Mines and Refining: 540 m€
- JSC Kovdorsky GOK Ore-Dressing Technology: 75 m€
- JSC Kovdorsky GOK Production Capacity Modernization: 65 m€
**Total:** 2,350 bn€

**Oil and gas**
- Novatek LNG Terminal Ura Guba Murmansk: 1,0 bn€

**Hydro energy**
- RusGidroTidal Hydroelectric Power Station: 110 m€
  Dolgaya-Vostochnaya Bay
Nuclear energy
Lifecycle Extension Kola NPP Units 1 and 2  140 m€

Energy Transfer Networks
Kola MMC/JSC Apatit/TGK1 Transit Lines  100 m€

Transport infrastructure
Murmansk Transport Hub, General Development  2,1 bn€
Railway Vykhodnoi – Lavna Finalizing  150 m€
Murmansk Railway and Bus Stations  75 m€
Murmansk Port Cruiser Terminal  125 m€
Murmansk Airport Expansion  50 m€
Total:  2,500 bn€

All total:  8,300 bn€
5.8 ARKHANGELSK Region
Arkhangelsk Region belongs to the northern part of North West Russia. It has 3000 km coast by the White Sea, Barents Sea and Kara Sea. The region includes the Nenets autonomous district, the Novaya Zemlya and the Franz Josef Archipelago. Total area of the region is 410.700 square kilometers.

Population in Arkhangelsk region is 1 230 000 which is 0.8% of Russia’s population. The population density is 2,2 per sq. km. and 74 % of the inhabitants live in cities and 26% live in rural areas. City of Arkhangelsk is the capital of the region and it has 356.000 inhabitants.

**Industrial production**

Industry is the key factor of Arkhangelsk Region economy. Main branches of business are forest industry and machine building industry. The Arkhangelsk region ranks eighth in Russia and second in the North-western Federal District in the volume of forest resources. Total square of commercial forests is 22 mln. hectares, timber reserves — 2,8 billion m3. Timber reserves of the Arkhangelsk region are recognized to be of high quality.

The region produces 30% of Russia’s exported sawn material and 25% of paper and cellulose exports. Forestry, wood processing and pulp & paper are very important sectors of the economy—contributing over 40% to the regional production volume. According to regional administration, there are over 200 wood cutting enterprises in the region and some 30 wood processing companies.

An impediment to increased production is poor road infrastructure, especially bad access to forests. Modernization and productivity enhancement on existing sawmills are the priorities for development of logging and wood processing sectors. Active processing and
trading companies include Arkhangelsk Plywood Plant, Dvinosplav JSC, Primorsky Sawmill, Onega Sawmills, Solombala Sawing and Woodworking Combine, Timber Mill N3 and Timbex.

The three pulp & paper manufacturing facilities in the region are Kotlas (part of St. Petersburg-based Ilim Group), Arkhangelsk (part of Titan holding), and Solombala mills. In average, their output totals 728,000 tons of pulp, 320,000 tons of paper and 674,000 tons of cardboard.

A strong machine-building industry has developed in the Arkhangelsk region and it is specialized in shipbuilding. Shipbuilding is an important part of the regional economics because of high competence and unique production assets. The largest enterprises of this sector are “Sevmash” and “Zvezdochka”, which create near 90 % of proceeds of the sector.

These companies are constructing and repairing nuclear and diesel submarines, oil and gas platforms, ship vessels and others. The unique Russian center for construction, repairing and utilization of nuclear power submarines was founded here. The enterprises have facilities and technologies for construction of oil and gas platforms and necessary unique competence for implementation of the project of construction of floating nuclear thermal power station.

There is an infrastructure for preparation of specialists for machine-building sector. Today in Arkhangelsk region there are two higher educational establishments which train such specialists: Arkhangelsk State Technical University and Sevmashvtuz which is a branch of the St.-Petersburg Marine Technical University.

Sevmash has built an offshore ice-resistant platform for “Prirazlomnaya” oil field in the Pechora Sea. The total cost of the project was $1 billion. Sevmash is also a contractor of several oil companies to manufacture sea shelf platforms for oil and gas
development in Sakhalin. Zvezdoychka has a contract from the Finnish shipbuilding company, Azipod, to supply screw propellers for civil ships. The company is also Norway’s contractor to build bearing structures for tidal electrical power stations. However, attraction of investment is difficult due to the fact that the enterprise is still government property and is engaged in Russian military programs.

(Source: Arkhangelsk Region Government, Economic and Investment potential)

Arkhangelsk aims to be the international capital of the Arctic

The governor of Arkhangelsk Region, Mr. Igor Orlov has been very active during last years to develop the Arctic cooperation. He even nominated Arkhangelsk to the international capital of the Arctic in one of the numerous press conferences before “The Arctic: Territory of Dialogue”-forum in March 2017. According to Governor Orlov the main argument for this nomination was the fact, that the most important Arctic Forum of Russian Federation will after 2017 be held in Arkhangelsk every second year on a regular basis.

Arkhangelsk has also other significant Arctic connections. The administration of Northern Sea Route has two offices, one in Moscow and one in Arkhangelsk. The office in Arkhangelsk handles practical tasks connected to the route. Arctic transport connected to Northern Sea Route is also main part of the interests of Arkhangelsk Region in the Arctic Business.
5.8.1. Investments in Arkhangelsk Region up to 2030

The value of all investment projects in Arkhangelsk Region is 9,910 billion €. The biggest branch of business is transport infrastructure which has 7 billion of the total value. This consists of two long term projects, Belkomur railway and Deep-Sea Port “Sever” north from City of Arkhangelsk.

Belkomur has been on the investment lists already from the late 1930’s. It was stopped in 1950’s due to a mass amnesty of the main work force GULAG prisoners. The file was reopened in 1990’s and in 1995 the project consisted of new railway between Arkhangelsk-Syktyvkar- Kudymkar-Perm and it got the name Belkomur (White Sea – Komi – Urals).

In 2017 Arkhangelsk region signed agreement with Chinese Poly Group to build 795 km long new railway which makes 1252 km long Belkomur ready. After that, there has not been any news regarding the project, except connection to Chinese giant project called Polar Silk Road. Cooperation between Russian Federation and China has been increasing in Brics but also in Chinese Silk Road projects. Main interest of Chinese companies has been in Yamal LNG project and cooperation continues also in LNG2- project, which creates also one part of the Polar Silk Road from the port of Sabetta via Northern Sea Route to China. However, the success in these projects can impact also positively to Belkomur and the implementation could start before 2030.

Deep Sea Port “Sever” is closely connected with Belkomur. Poly Group is also partner in this project with COSCO, huge Chinese shipping company and China Marine Fuel Service are other Chinese partners. According to the administration of Murmansk Region this deep-sea port-project is not in the Russian priority list, but Murmansk
Transport Hub is listed. Main reason to this is probably the importance of Murmansk and its Sea Port for Novatek company which is the biggest shareholder in Yamal LNG2- project.

Arkhangelsk Region is strongly investing in forest and metal industry together with mining. New project is Pavloskoje lead/zinc mine in Novaja Zemlja archipelago. This project is included in the Governmental Program “Social and Economic Development of the Arctic Area of the Russian Federation” so during the development of Russian Arctic Zone this project has good chance to be implemented. The biggest mining investment plan is the Lomonosov diamond field by Severalmaz with 1,1 billion €.

Arkhangelsk Pulp and Paper Mill in Novodvinsk is investing to the reconstruction of board plant. In metal industry Zwyozdochka Shiprepairing Center project is 430 million € and it expanding and strengthening strong ship building cluster in Severodvinsk.

### 5.8.2 List of Investments

<table>
<thead>
<tr>
<th>Industry</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkhangelsk Pulp and Paper Mill Board Plant Reconstruction</td>
<td>175 m€</td>
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<tr>
<td>Ustyanskaya Timber Processing Company LLC</td>
<td>120 m€</td>
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<td>Sawmill 25 Arkhangelsk</td>
<td>60 m€</td>
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<td>Forest LLC Plesetsky District Biofuel Production</td>
<td>5 m€</td>
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<tr>
<td>Zwyozdochka Shiprepairing Center JSC</td>
<td>430 m€</td>
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<td>Arkhangelsk Trawl Fleet fishing Vessel Investments</td>
<td>230 m€</td>
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<tr>
<td>Arkhangelsk Trawl Fleet Fish Processing Plant</td>
<td>12 m€</td>
</tr>
<tr>
<td>Arkhangelsk Region Food Industry Investment Projects</td>
<td>18 m€</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,050 bn€</strong></td>
</tr>
</tbody>
</table>
Mining industry
Severalmaz PJSC Lomonosov Diamond Deposit 1,1 bn€
JSC Atomredmetxoloto, Pavlovskoje Lead-Zinc Mine 500 m€
Omya Group, Plesetsk Limestone Mine 50 m€
Total: 1,600 bn€

Bio energy
Lensky District Eco-Technology Park 150 m€
Arkhangelsk Waste Treatment Center 30 m€
Total: 180 m€

Energy Transfer Networks
Mezensky and Leshukonsky District Networks 80 m€

Transport infrastructure
Belkomur-Project Poly Group 5,0 bn€
Sever Deep Sea Port, Arkhangelsk 2,0 bn€
Total: 7,0 bn€
All total: 9,910 bn€
6. REFERENCES AND SOURCES OF INFORMATION

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en.dvinainvest.ru

Murmansk Region:
Ministry of Economic Development of Murmansk Region

North of Norway:
Konjunkturbarometeret Nord

North of Sweden:
NHO Norrbotten
Invest in Norrbotten
Västerbotten Investment Agency

Kainuu Region:
Invest in Kainuu

Oulu Region:
BusinessOulu
Oulu Chamber of Commerce

Lapland:
Lapland Chamber of Commerce
7. PROMOTING BUSINESS IN THE NEW NORTH

Lapland Chamber of Commerce (est. 1939) mission is to create success in the North.

Representing views and opinions of trade and industry the Chamber is working on better business environment, offering business related services and building networks in order to maintain and enhance business competitiveness.

International cooperation and networking plays an active role of the Chamber activities in the European High North, forgetting not the worldwide context.

Members of the Chamber include a variety of companies from big industrial companies to SME’s from different industries and branches of business, municipalities and other business related services.

We are open for cooperation and see that each new contact is a chance of new business opportunities. Please don’t hesitate to contact us for more information.

LAPLAND CHAMBER OF COMMERCE
www.lapland.chamber.fi
www.arcticbusinessforum.com
EUROPEAN HIGH NORTH INVESTMENT POTENTIAL 2019–2030

- LAPLAND 2019–2030 – 13.690 BN€
- NORTHERN NORWAY 2019–2030 – 40.065 BN€
- NORRBOTTEN 2019–2030 – 10.830 BN€
- OULU REGION 2019–2030 – 14.040 BN€
- VÄSTERBOTTEN 2019–2030 – 8.890 BN€
- KAINUU REGION 2019–2030 – 3.940 BN€