BUSINESS INDEX NORTH

A periodic report with insight to business activity and opportunities in the Arctic

BIN Area
3,6 million People
950 Billion NOK Business Turnover
Total GVA 2016

North Ostrobothnia: 12,000
Nordland: 10,000
Norrbotten: 9,000
Västerbotten: 8,000
Troms: 7,000
Lapland: 6,000
Arkhangelsk Oblast: 5,000
Murmansk Oblast: 4,000
Finmark: 3,000
Nenets: 2,000
Kainuu: 1,000
Growth in GVA per region, %, 2011-2016

- Kainuu
- Lapland
- North Ostrobothnia

Finland total

- Nordland
- Troms
- Finnmark

Norway total

- Norrbotten
- Västerbotten

Sweden total

- Arkhangelsk Oblast
- Murmansk Oblast
- Nenets

North-West Federal District

0%  | 5%  | 10%  | 15%  | 20%  | 25%  | 30%  | 35%  | 40%
Annual average turnover growth, in EUR, 2015–2018

- Sweden total
- Norrbotten
- Västerbotten

- Norway total
- Finnmark
- Troms
- Nordland

- Finland total
- Lapland
- Kainuu
- North Ostrobothnia

- BIN Area (excl. Russia)
Annual average turnover growth, in EUR, 2015-2018

- North-West Federal District: 0.6%
- Nenets Autonomous Okrug: -8.1%
- Arkhangelsk Oblast: -2.3%
- Murmansk Oblast: -7.6%
### Annual average turnover growth, in EUR, %, 2015-2018

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing (excl construction)</td>
<td>25.45%</td>
</tr>
<tr>
<td>Wholesale and retail trade, transport, accommodation and food service activities</td>
<td>23.18%</td>
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<tr>
<td>Construction</td>
<td>10.98%</td>
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<tr>
<td>Professional, scientific and technical activities; administrative and support service activities</td>
<td>7.26%</td>
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<tr>
<td>Agriculture, forestry and fishing</td>
<td>5.20%</td>
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<tr>
<td>Extraction and Mining</td>
<td>5.18%</td>
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<tr>
<td>Real estate activities</td>
<td>4.96%</td>
</tr>
<tr>
<td>Public administration, education, human health, arts, recreation and entertainment, other services</td>
<td>2.32%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>1.78%</td>
</tr>
</tbody>
</table>
Annual average growth in turnover in BIN regions vs country total, 2015-2018

- Sweden
- Norway
- Finland
- NW Russia

BIN regions vs National average
Growth in turnover as index of national currencies, 2009-2018

- Kainuu
- North Ostrobothnia
- Nordland
- Lapland
- Västerbotten
- Finnmark
- Norrbotten
Turnover, billion EUR, 2018

- Nordland: 17.48
- North Ostrobothnia: 16.10
- Norrbotten: 13.17
- Västerbotten: 12.59
- Troms: 12.15
- Lapland: 9.43
- Arkhangelsk Oblast: 6.60
- Murmansk Oblast: 5.14
- Finnmark: 3.80
- Nenets: 1.77
- Kainuu: 1.59
Change in total population in the BIN area, %, 2008–2017

- Arkhangelsk Oblast
- Kainuu
- Murmansk Oblast
- Lapland
- Norrbotten
- North-West Federal District
- Nordland
- Finland total
- Västerbotten
- North Ostrobothnia
- Finnmark
- Nenets Autonomous Okrug
- Troms
- Sweden total
- Norway total

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Change in population in the BIN area in absolute numbers, 2008–2017

- Arkhangelsk Oblast
- Murmansk Oblast
- Kainuu
- Lapland
- Norrbotten
- Nenets Autonomous Okrug
- Finnmark
- Nordland
- Västerbotten
- Troms
- North Ostrobothnia

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Change in youth population in the BIN area, age group 0–4 and 5–19 year olds, %, 2008–2017

-20% -15% -10% -5% 0% 5% 10% 15% 20% 25% 30%

- Kainuu
- Lapland
- Norrbotten
- Nordland
- Finnmark
- Troms
- Arkhangelsk Oblast
- Västerbotten
- Finland total
- Murmansk Oblast
- North-West Federal District
- Norway total
- North Ostrobothnia
- Sweden total
- Nenets Autonomous Okrug

Age group 0–4
Age group 5–19
Change in population aged 20–39 in the BIN area, %, 2008–2017

- Arkhangelsk Oblast
- Murmansk Oblast
- Kainuu
- Finnmark
- Nenets Autonomous Okrug
- North Ostrobothnia
- Nordland
- Finland total
- Troms
- Norrbotten
- Lapland
- Norway total
- North-West Federal District
- Västerbotten
- Sweden total
Tertiary education attainment, by sex, 2017

Females | Males
---|---
Kainuu | |
Lapland | |
North Ostrobothnia | |
Finland total | |
Troms | |
Nordland | |
Finnmark | |
Norway total | |
Norrbotten | |
Västerbotten | |
Sweden total | |
Professionals, % of employees, by sex, 2016

- Kainuu
- Lapland
- North Ostrobothnia
- Finland total
- Norrbotten
- Nordland
- Sweden total
- Västerbotten
- Norway total
- Finnmark
- Troms

Males vs Females
Digital infrastructure
Digital infrastructure readiness for very high-speed broadband 1GB+, % of households, 2017-2018

- **Finnmark**
- **Nordland**
- **Troms**
- **Norway total**
- **Norrbotten**
- **Västerbotten**
- **Sweden total**
- **Kainuu**
- **Lapland**
- **North Ostrobothnia**
- **Finland total**

- **Access via hybrid fiber-coaxial TV cable (HFC)**
- **Access via fiber-optic cable (FTTx - fiber to the home)**
R&D in Business

Photo: BiotechNorth
Number of R&D staff in business sector per 1000 employed (annual average for 2013-17)

- **Finland total**: 12.9
  - North Ostrobothnia: 23.8
  - Kainuu: 3.7
  - Lapland: 2.5

- **Sweden total**: 12.5
  - Västerbotten: 4.5
  - Norrbotten: 3.5

- **Norway total**: 7.3
  - Troms: 3.5
  - Nordland: 2.7
  - Finnmark: 0.7

- **North-west Federal District**: 9.2
  - Arkhangelsk Oblast (without Nenets): 0.8
  - Murmansk Oblast: 0.7
  - Nenets: 0.0
Number of patent applications to EPO per 10000 capita (annual average 2016–2018), by address of inventor

- **Finland total**: 2.94
  - North Ostrobothnia: 0.32
  - Kainuu: 0.16
  - Lapland: 0.15

- **Sweden total**: 3.40
  - Norrbotten: 0.79
  - Västerbotten: 2.29

- **Norway total**: 1.03
  - Troms: 0.52
  - Finnmark: 0.09
  - Nordland: 0.04

- **North-West Russia**: 0.04

Number of national patent applications per 10000 capita (annual average 2008–2017), by address of owner

- **Finland total**: 2.87
  - North Ostrobothnia: 1.44
  - Lapland: 0.89
  - Kainuu: 0.58

- **Sweden total**: 2.57
  - Västerbotten: 1.95
  - Norrbotten: 1.32

- **Norway total**: 2.13
  - Nordland: 0.93
  - Troms: 0.84
  - Finnmark: 0.78

- **North-West Russia**: 1.67
  - Arkhangelsk Oblast (without Nenets): 1.01
  - Murmansk Oblast: 0.46
  - Nenets: 0.46

**BUSINESS INDEX NORTH**
Energy

Øvre Forsland hydro plant. Photo: Helgeland Kraft AS
Electrical power production
Electricity balance 2017 (GWh)

- Västerbotten
- Norrbotten
- Nordland
- Murmansk
- North Ostrobothnia
- Lapland
- Finnmark
- Nenets
- Troms
- Kainuu
- Arkhangelsk incl Nenets

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Summary

• 94 billion Euro economy with growth 5.4% per year; need capital and more workplaces to continue positive trend.
• New industries thrive (aquaculture and data storage) and traditional ones do better (manufacturing and extraction) in the recent years

• Framework conditions:
  • Demographic challenges and workforce education level should be addressed more carefully
  • Connectivity into the age of internet of things needs improvement
  • Too low R&D investments, but many very innovative companies
  • Energy surplus calls for local investment in energy transforming businesses
  • Arctic transport evolves: more Rail, more Road, more Maritime transport
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