

At Polar Transport Division (Dudinka port), the Company completed the first phase of repairs at Berths No. 4 and 5 and engineering surveys for the repair of Berth No. 3 in 2017. The repair programme to prevent the moorage wall destruction is scheduled to be completed in 2018. The Company modernised a fire water line at the log yard and introduced an integrated safeguarding system at port facilities. Additionally, two Liebherr mobile cranes and a mobile crane boom were repaired, two Liebherr crane booms were purchased for replacement in 2018, and a hangar was acquired to repair mobile cranes. The Company also purchased 10 units of road vehicles and cargo handling equipment.

In 2017, Yenisey River Shipping Company continued working on shipbuilding at Krasnoyarsk Ship Repair Yard and engineering design of new shipbuilding facilities. The project was launched in 2017 to provide the Company with its own river vessels to replace

retiring ships. The USD 3.4–5.1 mln (RUB 0.2–0.3 bn) project is expected to be completed in 2019. An automatic fire extinguishing sprinkler system was installed in the administrative building. The work is ongoing to improve onshore infrastructural facilities and increase the level of traffic safety by installing CCTV and fuel monitoring systems on vessels.

In 2017, the Company continued improving logistics processes in its transportation facilities and units. For Krasnoyarsk River Port and Lesosibirsk Port, it was the first navigation period to use the Automated Cargo Logistics Management System (ACLMS) as a master management system. Despite certain challenges, the introduction of ACLMS improved coordination between transshipment ports, carriers and end customers and provided a single reporting platform for freight transportation by river. These efforts will continue.

Production and sales

In 2017, Nornickel maintained its reputation as a reliable supplier of high quality products. The integrated index of customer satisfaction with the Company's products and services matched the criterion for positive performance.

Product range

One of the Company's objectives is to make sure its product range is in line with the current and prospective metals demand.

Over the last three years, Nornickel increased nickel supplies to segments other than stainless steel production by 32% (the 2017 supplies exceeded 100 kt of nickel), which was achieved by leveraging a focus strategy to boost sales to Chinese and Russian alloy and special steels makers, as well as by strengthening positions on China's electroplating market through the product range optimisation and extensive customer training. The Company also fostered cooperation with world-leading companies in the batteries segment.

Norilsk Nickel Harjavalta is considered one of world's foremost producers of nickel used to make precursors (semi-products essential for manufacturing the cathode material that forms part of batteries). Norilsk Nickel Harjavalta is uniquely flexible when it comes to manufacturing, which enables it to factor in consumer preferences in developing its product portfolio.

Norilsk Nickel Harjavalta's nickel sulphate is rightly considered the industry benchmark and is widely used in battery manufacturing. The Company plans to proactively market briquettes, which are traditionally supplied to stainless steel manufacturers, among battery and precursor producers.

In response to strong growth of demand by battery manufacturers, the Company is upgrading its nickel powder packaging capacities in order to broaden the range of packages and create individual solutions based on consumer preferences.

The Company considers joint ventures to produce nickel- and cobalt-bearing value-added products for the battery segment to be a promising direction for expanding the product range and increasing production volumes.

Key consumer industries

Construction: Cu
 Transport: Cu
 Heavy engineering: Cu
 Production of steel and non-ferrous metal alloys: Te, Ni, Co
 Stainless steel (200 and 300 series): Ni
 Non-ferrous metallurgy: Te, Na₂SO₄, NaCl
 Power grids: Cu
 Electronics manufacturing: Pt, Pd, Ru, Ag
 Electrical engineering: Se, Co, Rh, Ir, Ag

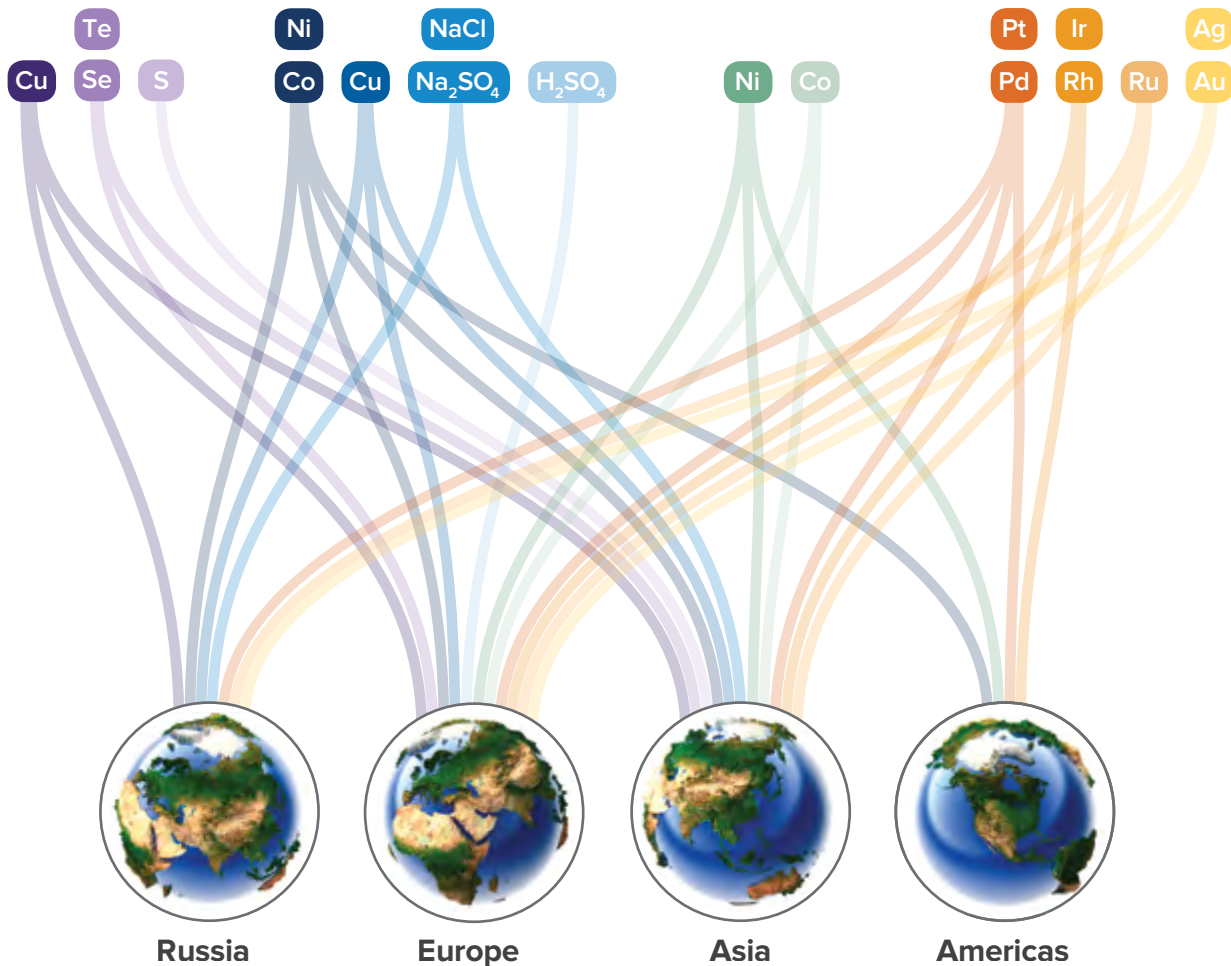
Electroplating: Ni, Co
 Li-ion/Ni-MH batteries: Ni, Co
 Additives and catalysts: Co
 Rubber vulcanising: S
 Spark plugs: Ir
 Pharmacology: Na₂SO₄, NaCl
 Medicine equipment: Pt
 Jewellery manufacturing: Pt, Pd
 Machine building and consumer goods production: Cu

Investments: Au
 Photovoltaics and thermoelectrical materials: Te
 Rubber industry: Te
 Animal feed and fertilisers: Se, S, H₂SO₄
 Glass industry: Se, Te, Rh
 Synthetic detergents production: Na₂SO₄, NaCl
 Pulp and paper, textile, leather industry: Na₂SO₄, NaCl
 Chemical industry: Se, S, Co, H₂SO₄, Pt, Pd, Rh, Ir, Ru

End product manufacturing

Polar Division	Kola MMC	Norilsk Nickel Harjavalta Oy	Gulidov Krasnoyarsk Non-Ferrous Metals ¹
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Types of products



Sales markets

- Copper ● Tellurium, Selenium ● Sulfur ● Nickel, Cobalt ● Copper ● Sodium sulfate and chloride ● Sulfuric acid ● Nickel ● Cobalt
- Platinum, Palladium ● Iridium, Rhodium ● Ruthenium ● Silver, Gold

¹ Refining of precious metals manufactured from Polar Division's and Kola MMC's feedstock under a tolling agreement

Sales strategy

Sales, along with production, have traditionally been a key value adding line of Nornickel's business.

When it comes to nickel products, the sales strategy focuses on achieving a balance between supplies to stainless steel manufacturers and to other industries.

As the world's largest producer of palladium, the Company continues to implement the strategy of entering into direct long-term contracts with end consumers to ensure sustainable and strong demand for platinum group metals.

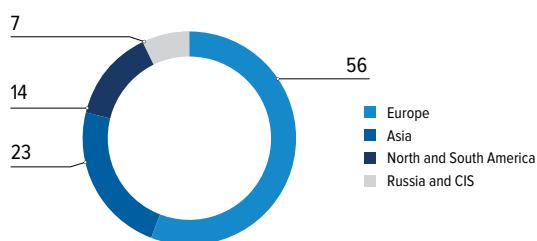
One of Nornickel's priorities is stable supply amid the growing demand for PGM:

- The Company refused to launch a marketing programme aimed at promotion of palladium in jewellery manufacturing in order to make it clear to the market that it intends to focus on supplying palladium for the automotive industry;
- In 2016, the Company established the Global Palladium Fund (GPF). In 2017, the GPF built Pd reserves of around 0.55 mln oz to safeguard supplies for the increasing demand from key consumers that are the Company's customers in 2018 and onwards (mostly from the automotive industry). The reserves were formed from purchases

of metal from third parties and the Company itself in accordance with consumer requirements to the product range.

To boost sales premiums and liquidity, Norilsk Nickel registers its products on the world's major exchanges, including the London Metal Exchange and Shanghai Futures Exchange.

Sales by region // %



The Company supplies its products to

34 countries

Company Sales

