

#### **REPORTING PERIOD FROM 1 JANUARY 2016 TO 31 DECEMBER 2016**

The 2016 annual report of Public Joint Stock Company "Mining and Metallurgical Company "Norilsk Nickel" (MMC Norilsk Nickel, Nornickel, the Company) incorporates the results of MMC Norilsk Nickel and other operations of the Norilsk Nickel Group (the Group). For the purposes of this annual report, the Norilsk Nickel Group shall refer to the group of companies that includes MMC Norilsk Nickel and its subsidiaries. The largest subsidiaries of the Norilsk Nickel Group are presented in the 2016 consolidated IFRS financial statements.

#### **2016 ANNUAL REPORT PJSC "MMC "NORILSK NICKEL"**

Accuracy of information confirmed by the Audit Commission of MMC Norilsk Nickel / Opinion of 14 April 2017 /

Preliminarily approved by the Board of Directors of MMC Norilsk Nickel / Minutes No. GMK/15-pr-bd of 28 April 2017 /

Approved by the Annual General Meeting of Shareholders of MMC Norilsk Nickel / Minutes of 9 June 2017 /

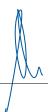
President, Chairman of the Management Board PJSC "MMC "NORILSK NICKEL"

Vladimir Potanin



Senior Vice President, Chief Financial Officer PJSC "MMC "NORILSK NICKEL"

Sergey Malyshev



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# **GROUP OVERVIEW**



The core activities of the Group are prospecting, exploration, mining, and enrichment, processing of minerals, production, marketing and sales of base and precions matals. The Company supplies its products to more than 30 contries worldwide.

Norilsk Nickel Group is a leader in the metals and mining industry in Russia, one of the largest producer palladium and refined nickel in the world, one of the largest producers of platinum and copper. Norilsk Nickel Group also produces cobalt, rhodium, silver, gold, iridium, ruthenium, selenium, tellurium and sulfur.



**Online report** is avaiballe on website http://ar2016.nornik.ru/en/ No.1 No.2 in global nickel production

in global palladium production

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176 Statement of management's responsibilities for the preparation and approval of the consolidated financial statements for the year ended 31 December 2016

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Metric conversion table and currency exchange rates

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of PJSC "MMC "NORILSK NICKEL"

244 Contacts In July 2016, the Company unveiled its new brand, with the changes centring around its name, visual representation and key elements of the brand platform.

In November 2016, the Company joined the United Nations Global Compact, a major UN initiative in the area of corporate social responsibility and sustainable development.



# TIER I ASSETS AS THE PLATFORM

# FOR SUSTAINABLE DEVELOPMENT



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GROUP PROFILE

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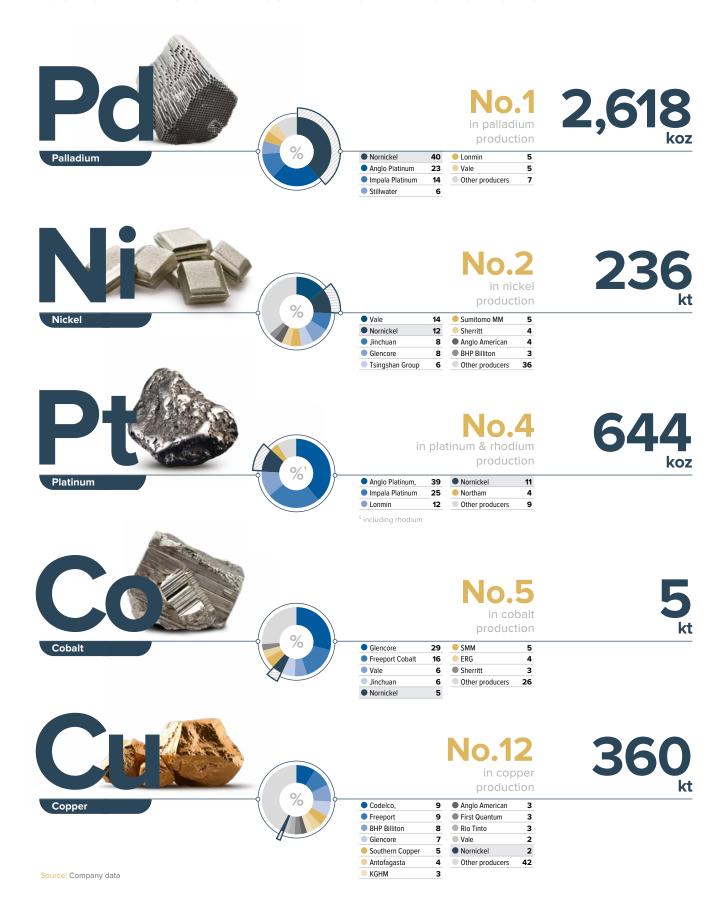


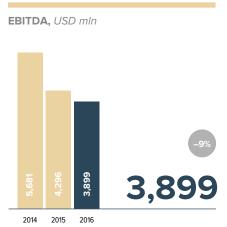




## **HIGHLIGHTS**

#### POSITION IN THE GLOBAL INDUSTRY AND OPERATING HIGHLIGHTS

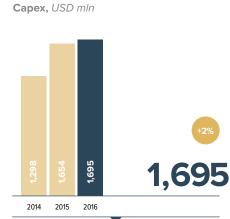




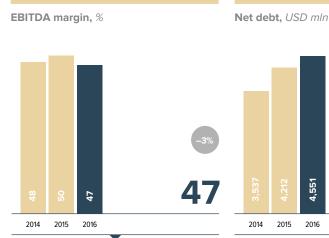
The reduction was mostly driven by lower metal prices and cost inflation, partly offset by the sale of metal stocks and effect of RUB depreciation on cash costs.



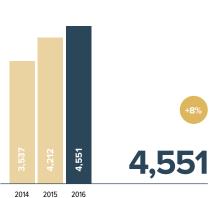
Net profit increased mainly due to appreciation of RUB as of the end of the reported period.



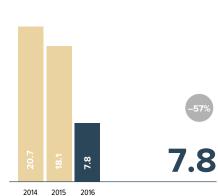
Major investments in 2016 included projects related to the shutdown of Nickel Plant, capacity expansion and modernization of Talnakh Concentrator and Nadezhda Plant as well as an active construction phase of the Bystrinsky (Chita) project.



EBITDA margin is one of the highest in the global mining industry.



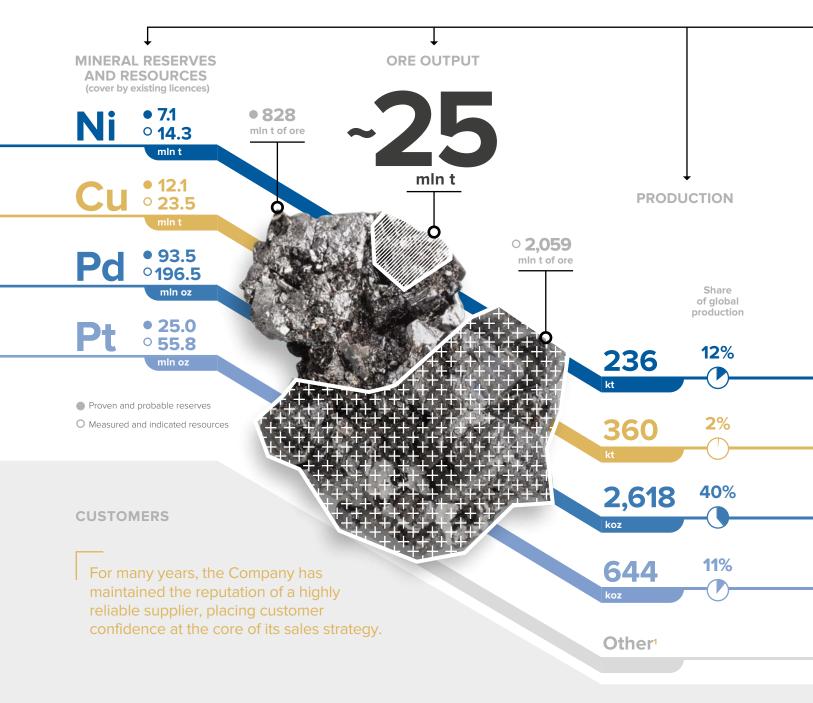
Balance sheet remained conservative with net debt/EBITDA ratio of 1.2x as of December 31, 2016. Solid financial position is confirmed by investment grade credit ratings from Standard & Poor's and Fitch rating agencies.



Dividends per share, USD

One of the highest dividend-yielding stocks in the global industry, with interim dividend for 9M 2016 of a total USD 1.2 bn or USD 7.4 per share paid in February 2017.

# **BUSINESS MODEL**



#### **PRODUCT OFFERING**



- Nickel cathodes
- ° Carbonyl nickel (powder and pellets)
- Nickel briquettes
- ° Electrolytic nickel powder
- Nickel hydroxide and nickel hydroxycarbonate
- Nickel sulphate



• Copper cathodes



- Cobalt ingots
- ° Cobalt oxide
- Cobalt cathodes
- Cobalt concentrate
- Cobalt sulphate



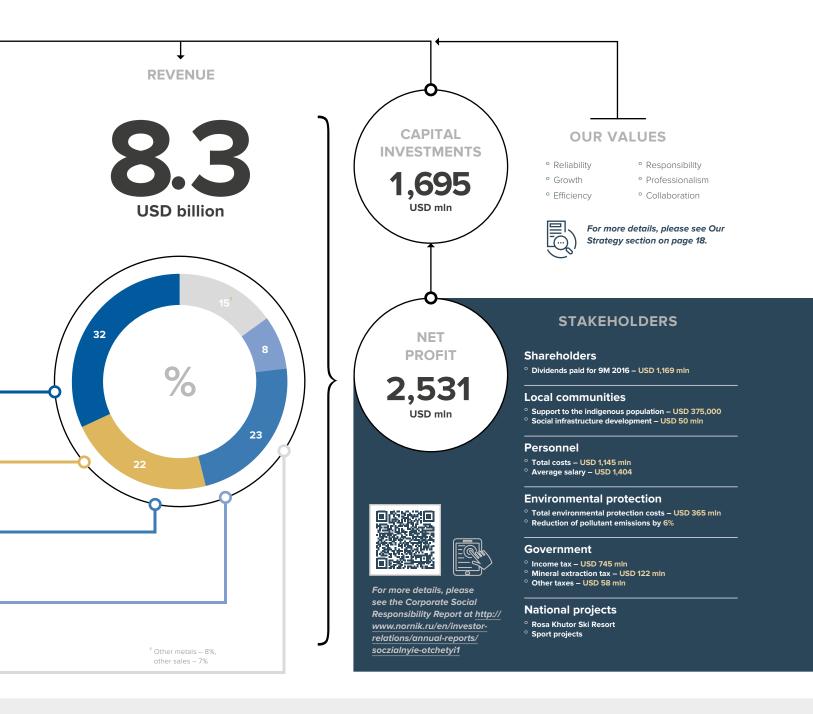
Precious metal concentrates

#### **METAL SALES GEOGRAPHY**



Europe	57%
Asia	23%
Americas	10%
Russia and CIS	10%





#### **CUSTOMER BASE**

1,460

sales contracts

436

customers

**78**%



#### **END USES**





Electronics



Coating



Batteries





Medicine

Coins



Catalysts



Jewellery

sales to end consumers



Wire

Nornickel // Annual report 2016

# **BUSINESS FOOTPRINT**

Production and sales

The Group's production assets span across three countries – Russia, Finland and South Africa. The Company also owns fuel, enegry and transportation assets, several R&D units and a unique Arctic cargo fleet.



Norilsk Nickel's Polar Division is the Company's key production asset.

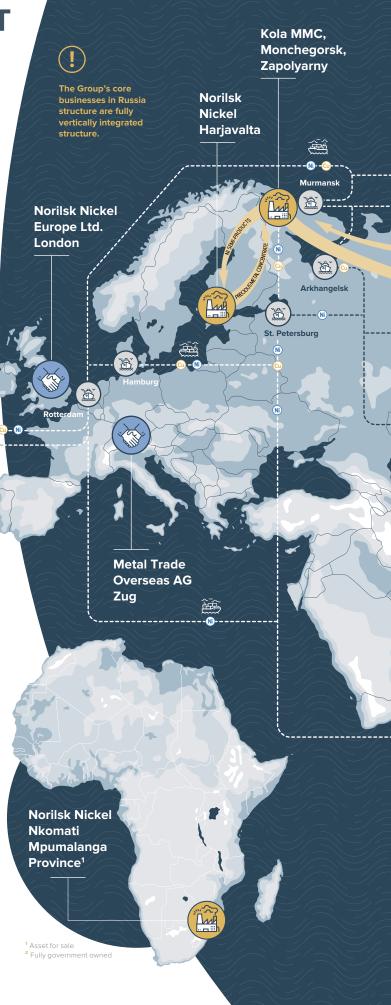
Kola MMC is the Company's second largest production asset and the leading industrial facility of the Murmansk Region.

In Finland, Norilsk Nickel operates Norilsk Nickel Harjavalta, which became part of the Group after the acquisition of OM Group's nickel business in 2007. The plant is fully integrated into the Group's production chain.

In South Africa, the Company owns 50% of Nkomati, a nickel mine developed jointly with African Rainbow Minerals. The transaction to sell the 50% interest is currently pending.



For more details on the production assets, please see the Production section on page 54





ORECIOUS METAL CONCENTRATE

**3** 





Production asset



Sales company



Development project



Transit warehouse



Kra No (pre

Krasnoyarsk Gulidov Non-Ferrous Metals Plant<sup>2</sup> (precious metal refining)

> Bystrinsky MPP Gazimursky Zavod



Customers in CIS

Customers

in Russia

in China

Customers

**E** 

Customers in Asia Norilsk Nickel Marketing Shanghai



Norilsk Nickel Asia Hong Kong



For more details on deliveries, please see the Products and sales section on page 82

Global sales network of

Customers in Asia

>30 countries

Honeymoon Well (Licence)



# MODERNISATION OF DOWNSTREAM ASSETS

# FOR BETTER PERFORMANCE



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# STRATEGIC REPORT

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# **CHAIRMAN'S LETTER**



#### Dear Shareholders,

In 2016, our business continued to face challenges posed by metal prices softness and currency volatility on the back of weaker growth expectations. Yet, at Nornickel, these demanding conditions have confirmed that the things we do control – such as development of Tier I assets, prudent capital allocation and cost controls have not only helped us to deal with those challenges, but to strengthen our business model and position us as the industry leader for the years ahead.

Carett Penny

#### Gareth Penny Chairman of the Board of Directors PJSC "MMC "Norilsk Nickel"

Despite macroeconomic challenges that put some pressure on our financial position, we did not lose sight of our objectives. In fact we accelerated our strategic transformation and delivered a number of notable accomplishments by investing USD 1.7 billion in our business during the year. We launched the upgraded Talnakh concentrator with expanded capacity and completed most projects related to the modernisation of Nadezhda smelter. More importantly, we closed the Nickel Plant in Norilsk. The shutdown of this outdated and pollutive facility is one of the key milestones of a large-scale downstream reconfiguration programme, which had put a strong emphasis on improving the Company's environmental footprint. We also continued the development of our highly profitable brownfield upstream projects in the Polar Division, as well as the Bystrinsky copper-gold project in Russia's Siberia.

Throughout 2016, our Board and management team acted on several fronts to ensure that Nornickel would not only address current macroeconomic challenges, but also have the foundation for continued success regardless of external conditions. We continued the implementation of the cost reduction programme announced in 2015 and managed to deliver good financial results. Despite low metal prices and appreciating local currency, we delivered EBITDA of USD 3.9 billion posting an industry-leading margin of 47%.

As many of you know, competitive dividend has been the Company's priority for the last four years and is still one of the pillars of Nornickel's equity story. Following this pattern, we paid an interim dividend for nine months of 2016 in the amount of USD 7.4 per share, and the Board recommends to pay additional USD 7.8 per share as the final dividend for the year 2016. At the same time, maintaining a sound balance sheet and sustaining

investment-grade credit rating is also of critical importance for us. As a result, in April 2016 the Board of Directors decided to amend the dividend policy of the Company by pegging the dividend payout ratio to the net leverage. That decision came amidst an unprecedented plunge in metal prices and is designed to ensure both sustainable dividend yield and a well-protected balance sheet.

We are continuing to take a systematic approach to identify and eliminate unsafe practices in our workplaces. In 2016, we continued to enhance our serious injury and fatality prevention programmes, started the implementation of the new Risk Control programme, updated a number of related corporate standards and rolled them out to all subsidiaries. We also started an independent audit of our occupational safety practices and managerial competences in order to assess the changes we implemented in the last three years. We believe that developing strong safety leaders is also paramount and conducted HSE training for over 300 managers and 4,000 new employees.

Turning the page to 2017, market visibility remains limited. In the second half of the year the situation on global commodity markets has stabilised and even improved, but remains fragile. Despite this uncertainty, I want to assure you that our company is well positioned to succeed. Our low-cost structure and disciplined approach to capital allocation make Nornickel resilient to macroeconomic headwinds and, thus, one of the best positioned investors in the metals and mining sector.

We continue to build on our long legacy of industrial leadership and core values – reliability, responsibility, efficiency, professional excellence and teamwork – to create a future of sustainable value creation over the long term.





#### Dear shareholders,

The year 2016 is now over, and its results fully confirm the advantages of Nornickel's business model and the Company's capability to demonstrate solid operating and financial performance amid a challenging economic environment. By closely following the strategy, practising responsible investments and harmonising the work of all employees, we were able to make our Company stronger, more efficient and safer.

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The past year was notable for extremely volatile metal prices and exchange rates. Sluggish global economic growth and political uncertainty greatly affected financial and commodity markets, significantly complicating key investment and management decisions. Back in early 2016, prices for nickel, copper and platinum group metals dropped to multi-year lows, while in the second half of the year, fiscal stimulus in China and monetary easing pursued by major central banks stoked a strong rally in commodities and a return of upbeat sentiment to the industry.

However, it would be premature to talk about stable growth, so during 2016, we stayed on the course that we took four years ago, reducing production costs and sticking to the budget in implementing the investment programme.

Furthermore, given the continuing uncertainty in global markets, we believe that we should balance long-term capital expenditure, dividend yield and leverage. This is why the Board of Directors decided to adjust our dividend targets, linking the level of annual payments to the leverage. This should ensure that, on the one hand, all shareholders receive a stable dividend income, and on the other hand, Nornickel maintains a strong financial position.

In spite of the challenging macroeconomic environment, Nornickel kept the pace of downstream reconfiguration and successfully implemented key investment projects. The modernization programme announced in 2014 reached its most active phase last year.

In May, the Company commissioned Stage 2 of Talnakh Concentrator and completed most of the upgrade at Nadezhda Metallurgical Plant. In August, we shut down Nickel Plant ahead of schedule, with all converter matte from Polar Division now sent for further processing to Kola MMC and Finland. Going forward, this development will enable the Company to avoid using third-party feedstock and thus boost production profitability.

We are well aware that the Company's financial performance is directly dependent on its employees, and therefore their health and safety are absolute priorities for us. We have yet to achieve the zero target in this area, stepping up measures to prevent accidents and workplace injuries. In 2016, we implemented a corporate health and safety change management standard, conducted a series of specialised training sessions for managers and young workers, and developed a programme that encourages staff to implement new approaches to occupational health and safety.

At the same time, we understand that today a well qualified employee places high demands not only on wages and workplace safety, but also on the standard of living in general. Therefore, we continued to invest in infrastructure such as broadband internet, the Norilsk airport, sports and recreation facilities. For a better life in the Polar Division, the key objective is to materially improve the environmental conditions. Last year, we took first yet important steps in this direction: Nickel Plant was shut down in August, with Polar Division's air emissions from nickel smelting now coming only from Nadezhda Metallurgical Plant, a facility much farther away from Norilsk residential areas. The comprehensive environmental programme will culminate in the Sulphur Project, which is already underway.

On a separate note, closing down Nickel Plant, quite a large industrial facility, we reallocated some 1,600 people to other assets within the Group, with 1,000 of them re-trained for other jobs.

Closing down Nickel Plant, we reallocated to other assets approximately

**1,600** employees

Re-trained for other jobs were

**1,000** employees

litional Information

Record low global prices for our products could not but affect our financial performance. Specifically, Nornickel's revenue decreased to USD 8.3 bn in 2016, with lower nickel and copper prices partially offset by sales of metal from the stocks accumulated in 2015.

EBITDA came in at USD 3.9 bn, while EBITDA margin stood at 47%. The Company's outstanding financial performance was attributed to by favourable exchange rates movement, efforts to control operating cost inflation and the sale of foreign and non-core assets.

Capital expenditure increased to USD 1.7 bn, matching our guidance from Strategy Day. The investments were focused on highly profitable mining projects, the completion of Stage 2 of the Talnakh Concentrator upgrade project, Polar Division's and Kola MMC's smelting and refining capacities, and the transition to the final phase of the Bystrinsky Mining and Processing Plant construction project.

Since net debt to EBITDA remained conservative at 1.2x at the end of 2016, in line with the revised dividend targets we provided a high dividend yield to our shareholders. Including interim dividend already paid, the Company is to distribute approximately USD 2.3 bn for the full year 2016.

Finally, in line with our strategy, we continued to mitigate risks to the execution of the Bystrinsky project. First, we signed a USD 800 m credit line agreement under project financing terms with Sberbank CIB. Second, in addition to selling a 10.67% stake in the project to China's Highland Fund, we have recently announced the sale of a 39% stake to CIS Natural Resources Fund, a consortium of Russian investors.

Today, we lay the foundation for a long-term development programme until 2023 designed to thoroughly upgrade all production capacities and, ultimately, make Nornickel one of the most advanced and environmentally responsible companies in the industry.

EBITDA margin for 2016 amounted to

47%

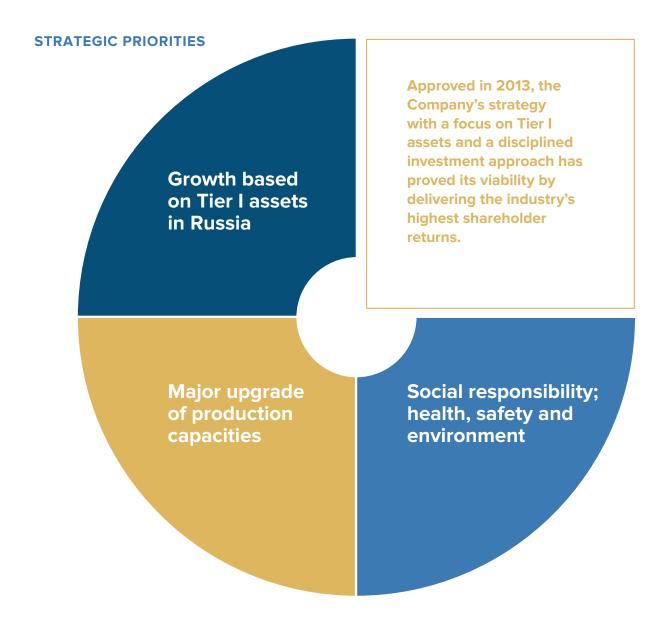
Vladimir Potanin

President,

Chairman of the Management Board PJSC "MMC "Norilsk Nickel"

## **OUR STRATEGY**

# Strategy overview



#### **OUR MISSION AND VALUES**

Through the efficient use of natural resources and equity, we supply mankind with non-ferrous metals, which make the world a more reliable place to live in and help people realise their aspirations for development and technological progress.

#### Reliability

an ability to address any challenges to ensure success for the business.

#### Growth

effective production ramp-up and upgrade, leverage of groundbreaking technologies and development of our people.

#### Efficiency

delivering against our targets in due time and at minimum costs.

#### Responsibility

a desire to honour our commitments and take on responsibility for our decisions.

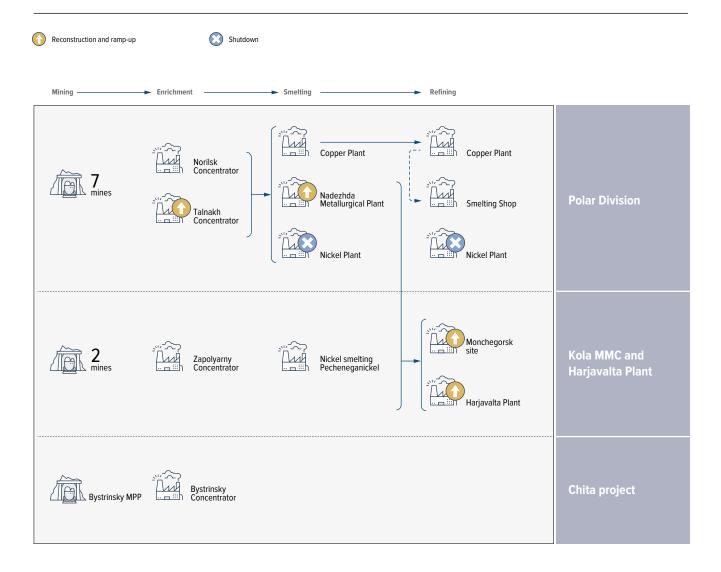
#### Professionalism

a sustainably strong performance.

#### Collaboration

an ability and desire to achieve goals through team work.

#### **RECONFIGURATION OF PROCESSING CAPACITIES**



#### **CAPITAL EXPENDITURES IN 2016**

Our investment project KPIs proved to be resilient to the challenging macro environment, and we will carry on with their implementation despite commodity market volatility.

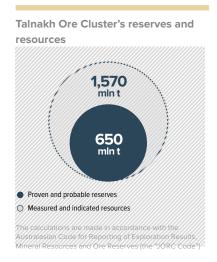




D

Production growth based on the existing Tier I assets in Russia

Development of the Talnakh Ore Cluster



Proven and probable ore reserves of the largest nickel mines, mln t





#### Optional growth areas

#### **Development of the Southern Cluster**

Its perimeter includes:

- ° Zapolyarny Mine and Medvezhy Ruchey open pit (Norilsk-1 Field)
- Norilsk Concentrator
- Stockpiles of secondary resources



Platinum group metal content in ore<sup>1</sup> Southern Cluster share in the Company's total output<sup>2</sup>

**70**%

~4%

#### Output increase potential, mln t



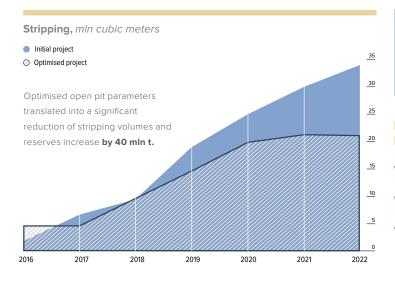
In 2016, Zapolyarny Mine output was 2 mln t, and the Company expects to increase it to 6 mtpa (4 mtpa by open pit mining and up to 2 mtpa by underground mining).

- of the value of all metals in ore
- of the value of all metals in ore
  of the value of the produced metals



#### New growth areas

#### Development of Bystrinsky Mining and Processing Plant (Chita project)



Increase of reserves

336 mln t

Capacity annual

10 mln t

# Lower project risks through project financing and investments of strategic partners:

- The project received USD 0.8 bn of project financing from Sberbank for eight years;
- $^{\rm o}$  Investment agreement with Highland Fund (China) to sell a 13.33% stake in the Bystrinsky project for USD 100 mln;
- The sale of an up to 39.32% stake in the project to the consortium of investors approved by the Board of Directors.





Using new technology to upgrade Talnakh concentrator

#### Ramp-up of Talnakh concentration capacity, mtpa



- Higher metal recovery rates driven by the new technology and of ore processing from Norilsk to Talnakh Concentrator (Ni ~2%, Cu ~2%, PGM ~4%)
- ° Higher Ni content in nickel-pyrrhotite concentrates
- ° Lower content of sulphur per tonne of concentrate

# The reconstruction of Talnakh Concentrator will transform the quality of the produced concentrate.

**Stage 1** of the Talnakh Concentrator reconstruction saw the installation of the floatation equipment by Outotec (OK-100 floatation units), and pumping equipment by Warman with an integrated automated control system.

**Stage 2** will see the installation of a unique semi-autogenous grinding mills by Metso Minerals.

This is a breakthrough solution never before used at Norilsk and Talnakh Concentrators.

The construction of a new tailings pit using cutting-edge waterproof geomembranes is nearing completion.





#### Building a single nickel smelting hub at Nadezhda Metallurgical Plant

#### Smelting capacity, mtpa



In August 2016, the Company shut down Nickel Plant, which had been in operation since 1942. The shutdown involved providing strong social guarantees to the plant workers.

To maintain and ramp-up the output, we expanded and upgraded the smelting capacities of Nadezhda Metallurgical Plant, which became a single smelting hub for all nickel feedstock from Polar Division.



# Creation of a large modern refining hub at Severonickel Plant

#### Refurbishment of Nickel Electrolysis Shop-1 (NES-1)



- ° Additional 45 kt of refining capacity;
- ° Construction ended in 2015;
- ° CAPEX of ca. USD 16 mln.

# Construction of Nickel Electrolysis Shop-2 (NES-2): technology upgrade and capacity ramp-up

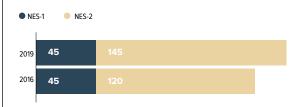


- Additional 25 kt of capacity;
- $^{\rm o}$  Switching to a chlorine leaching technology;
- ° Construction to end by 2018 with full ramp up by 2019;
- ° CAPEX of ca. USD 300 mln.

#### Status

- Equipment is being supplied;
- ° Construction and installation is under way.

#### Nickel refining capacity at Kola MMC, ktpa







Compliance with global HSE standards

LTIFR performance<sup>1</sup>

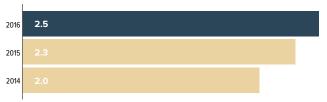


#### Strategic goals

- ° Zero work-related fatalities
- ° Reduction of LTIFR by 15%

 $^{\mbox{\scriptsize 1}}$  LTIFR is calculated as the number of lost-time injuries per million hours worked

Stronger safety culture: DuPont integral score of reduction safety



Appraisal: DuPont

- $^{\rm o}$  Continued introduction of uniform safety standards across key areas
- Implementation of a set of employee testing and training initiatives





# A comprehensive approach to environmental issues and creation of environmentally-friendly production processes

**Stage 1:** shutdown of Nickel Plant, upgrade of Talnakh Concentrator, refurbishment and ramp-up of smelting capacities at Nadezhda Metallurgical Plant.

**Stage 2:** shutdown at Copper Plant and launch of conversion operations and anode smelting of copper at Nadezhda Metallurgical Plant based on new technologies; SO<sub>2</sub> capture project at Nadezhda Metallurgical Plant; refurbishment and expansion of sulphur production at Copper Plant.

Stage 1 will translate into the reduction of  ${\rm SO_2}$  emissions in the residential area of Norilsk by

30%

The expected combined effect of Stage 2 is the lowering of SO<sub>2</sub> emissions across the Norilsk Industrial District

**75%** from the base of 2015



#### Social responsibility

#### Support of the largest nationwide sports and cultural projects













- ° Football Union of Russia
- ° CSKA professional basketball club
- º 2014 Olympic Games in Sochi
- o 2019 Winter Universiade in Krasnovarsk
- ° The Golden Mask (Russian national theatre festival and award)
- ° Rosa Khutor Ski Resort

#### Sustainable development of local communities

Norilsk infrastructure development













Kindergartens

Shopping malls

Sports facility

- ° Reconstruction of Norilsk (Alykel) Airport
- Construction of a fibre optic communication line between Novy Urengoy and Norilsk
- Support of nature reserves

#### Cooperation and employee incentivisation

- ° Renewed three-year collective bargaining agreement
- ° Our Home and My Home programmes
- Pension plans
- Relocation programme for Norilsk residents
- ° Subsidising the basic food basket

#### Government cooperation

- ° Stable tax regime
- ° Early elimination of export duties on nickel and copper
- ° Railway to Bystrinsky Mining and Processing Plant
- ° Co-financing the Alykel Airport reconstruction
- ° Environmental dialogue
- ° Strategic partnership with state-owned banks

# **GLOBAL METALS MARKET**

#### KEY TRENDS IN THE NICKEL MARKET

**2016:** the market balance has tilted towards deficit on the back of high price volatility; the demand increased driven by a greater output of stainless steel in China, whereas production went down due to the declined supply of nickel ore.

**Outlook: cautiously optimistic.** In 2017, the market deficit may go up and reach 100 kt, but market uncertainty will most probably persist going forward. As Indonesia is resuming its ore exports, the demand from China might ebb, while exchange warehouse stocks of nickel remain pretty high.

In 2016, the nickel price continued to decline and in February reached USD 7,710 per tonne, the record low since 2003. The trend was, however, reversed and the commodities prices started to go up on the back of China's plans for economic stimulus and the US Federal Reserve's decision to maintain the current interest rate. In June, optimism became the prevailing sentiment in the market owing to the forecasts of increased nickel consumption and the intention of the Philippine President to limit nickel ore mining and export volumes, and launch a mining audit. From August to September, the suspension of some of the nickel ore mining operations in the Philippines was offset by the expectations that Indonesia might lift the

ban on nickel ore exports. Before the announcement of the US presidential election results, nickel prices floated oscillated between USD 9,650 and USD 10,760 per tonne. The market positively responded to Donald Trump's victory and his campaign promises to ramp up investments in the country's infrastructure projects, with nickel prices reaching their annual peak of USD 11,735 per tonne. By the end of the year, though, they went down to USD 10,000 per tonne due to new export permits restrictions on the exports of nickel ore from New Caledonia to China, delays in the announcement of the Philippines' mining audit results, and no material drop in exchange nickel stocks. In 2016, the nickel price averaged USD 9,609 per tonne, down 19% y-o-y.



#### Surplus/deficit in the nickel market, kt



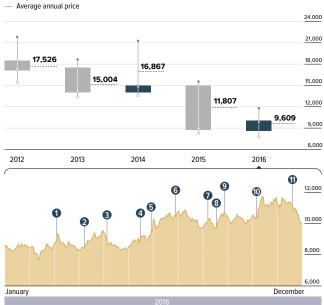
Source: Company data

Following several years of market surpluses, the nickel market went into a small deficit in 2016, with consumption outstripping production by 10 kt (c. 0.5% of the annual demand) for the first time over the past five years. The demand was mainly driven by an 8% y-o-y increase in metal consumption primarily attributable to the Asian producers of stainless steel and batteries. This coincided with stagnation in primary nickel production, as record low global prices for nickel caused a number of loss-making refined nickel manufacturers to shut down and prompted others to increase their efficiency and capacity utilisation. Following its 2014 ban on the exports of unprocessed ore, Indonesia commissioned new NPI production facilities. Another factor affecting the production rates was the shortage of lateritic nickel ore supplies due to a prolonged rainy season in 1H 2016 and the suspension of several mining operations in the Philippines as a result of the environmental audit in 2H -2016. This was exacerbated by the shortage of sulphide concentrates stemming from the closure of loss-making mines in 2015-2016 and the oneoff impact of Nornickel's capacity reconfiguration programme.

During the year, total exchange warehouse stocks at the LME and the SHFE decreased by 18 kt to 472 kt, or about 12 weeks of global consumption.

#### Nickel prices, USD/t

- Price increase (start-end of the year)
- Reduction of price (start-end of the year)
- All-year high



#### Drivers of the nickel price in 2016

- 1. China's government announced its economic stimulus plans, the People's Bank of China cut the interest rates
- 2. Growing demand for nickel in China
- 3. Volatility driven by Brexit uncertainty
- 4. The Supreme Court of the Philippines ruled to suspend nickel mining operations at five 7amhales-based mines
- 5. The launch of the Philippines' mining audit announced
- 6. The Philippines government suspends nickel ore mining operations
- 7. Delay in the announcement of final results for the Philippines' mining audit
- 8. The Philippine government announced possible suspension of operations at 10 additional mines
- 9. Preliminary mining audit results published in the Philippines
- 10. Donald Trump wins the US presidential elections
- 11. New Caledonia approves new nickel ore export restrictions

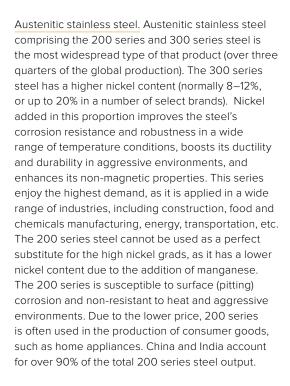
/ Global Metals Market / Nickel

#### CONSUMPTION

Nickel consumption is predominantly driven by the stainless steel industry

>72% in 2016

Stainless steel comes to the market in various shapes from all over the world, whereas its smelting structure ultimately determines the primary nickel consumption patterns.



Austenitic-ferritic steel. Austenitic-ferritic (duplex) stainless steels also use nickel and are characterised by a higher content of chromium (18–25 %) and molybdenum (1–4 %), but they account only for 1–2% of the global smelting output. For statistical purposes, these steels are usually grouped with the 300 series.

Ferritic and martensite stainless steels (400 series). These steels usually do not contain nickel, while their properties are similar to those of low-carbon and highly corrosion-resistant steels. However, their mechanical properties are inferior to those of austenitic stainless steels. These steels are mainly

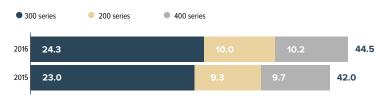


used to manufacture automotive exhaust systems, cargo container frames, water heaters, washing machines, utensils and cutlery, kitchenware, home decor items and razor blades.

Primary nickel consumption in 2016 by industry

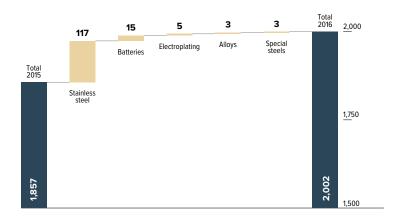


Stainless steel production by series in 2015-2016, mln t



Source: Company data

#### Primary nickel consumption in 2016, kt



44

In 2016, the total stainless steel output reached

+6%

Source: Company data

In 2016, the total stainless steel output increased by 6% and reached the record high of 44 mln t, with China being the biggest contributor. China now accounts for over 50% of the global stainless steel production vowing to the capacity expansion programmes at Beihai Chengde, Fujian Fuxin, Shandong Shengyang Jinhui and some other facilities, as well as the launch of new plants (most notably Delong and Shangtai Industry) integrated with NPI production sites.

Other regions also reported positive stainless steel production results. As a result of Europe's capacity optimisation programmes, lower output volumes from Germany and Italy were offset by the growing production in Finland, Belgium and Spain. India and other Asian countries also posted growth, while the US saw the first signs of recovery in production.

Consumption of primary nickel by the global stainless steel producers rose by 9% to 1.4 mln t as a result of an increase in the 300 series and 200 series output by 5% and 8%, respectively, and a relatively small upturn in the use of scrap.

Laterite nickel can be used as an alternative to high grade nickel in stainless steel production. Nearly all types of nickel feedstock are used in stainless steel production (except for a number of specific products, including nickel powder and compounds). Since the quality of nickel barely affects the quality of conventional stainless steel grades, the manufacturers opt for the cheapest nickel feedstock, turning to high grade nickel as their last resort.

This is the reason why high grade nickel consumption has been shifting from stainless steel production to some other metals-related industries in recent years. In 2016, around 60 kt of high grade nickel was substituted in this industry with higher volumes of ferronickel and metallised products with a lower nickel content.

In 2016, primary nickel consumption in alloy production increased by 2%, which was mainly attributable to the high demand from the aerospace industry.

Nickel is widely used in decorative and protective platings with their thickness ranging from 1 to 100 microns (nickel electroplating). In 2016, primary nickel consumption in the electroplating industry grew by 4% (5 kt), mainly due to the increased

Nickel coating is highly corrosionresistant, hard and pleasing aesthetically. It is also used as an alternative to chromium plating.

demand in Asia.



/ Global Metals Market / Nickel

The battery industry uses nickel as a major component of cathodes for battery cells. The extent of nickel utilisation depends on the battery type.

Nickel-cadmium batteries (Ni-Cd).

The first nickel-based batteries were developed in 1899. Currently, their use is restricted, since cadmium is banned as a toxic substance under the EU directive of 2014.

Online Nickel-metal hydride batteries (Ni-MH).

Ni-MH batteries were developed in 1989 as a substitute for Ni-Cd batteries to avoid using cadmium.

Producers use nickel to manufacture this type of batteries. Currently, though, the nickel-metal hydride battery market is growing at a slow pace (with hybrid vehicles being its only growth driver) and faces tough competition from the lithium-ion batteries.

#### 1 Li-Ion batteries (Li-Ion).

Li-lon batteries were first commercially released in 1991 and became fairly widespread due to their light weight, high energy density, and low capacity loss upon recharge. There are several types of lithium-ion batteries depending on the cathode materials.

Starting from 2014, primary nickel consumption in this industry has been advancing at an accelerated pace due to the higher electric car production and a shift to lithium-ion batteries in hybrid cars. In 2016, the consumption of primary nickel in the industry increased by nearly 15 kt (over 20%). This came as a result of capacity expansion programmes for nickel-cobalt-aluminium alloys in Japan and South Korea and development of the nickel-cobalt-manganese alloy industry in China, with cobalt continuing to be partially substituted with nickel.

#### PRODUCTION

Primary nickel can be split into two major groups:

- High grade nickel (cathodes, briquettes, carbonyl nickel and compounds) is produced from both sulphide and lateritic nickel ore. In 2016, the major high grade nickel producers included Nornickel, Vale, Jinchuan, Glencore, and Sumitomo Metal Mining.
- Low grade nickel (ferronickel, NPI and nickel oxide) is only produced from lateritic fore. In 2016, the major low grade nickel producers included Chinese and Indonesian NPI companies and also ferronickel producers: Eramet, Anglo American, South 32, Pamco, and Posco (SNNC).

In 2016, primary nickel production decreased by less than 1% y-o-y, or 10 kt, mostly as a result of the decline in the output of refined nickel and NPI in China due to the lack of row ore and concentrate. Another reason was the closure of a number of loss-making plants and capacity reconfiguration programmes implemented by several integrated producers. However, most of the discontinued capacity was offset by the increase in output and start of commercial production at new NPI plants in Indonesia. As a result, the market is going through structural changes: extra-low prices are causing a decline in high grade nickel production (due to negative profitability and insufficient supply of nickel concentrate), which is being replaced by low grade nickel in the form of NPI in Indonesia.

Increase in the consumption of primary nickel by producers of batteries for electric cars



Further expansion of the automotive industry, which is currently experiencing an upsurge in popularity of electric and hybrid cars, augurs well for the longer-term growth in primary nickel consumption, even though it strongly depends on the evolution of battery technologies going forward.

20%

In 2016, high grade nickel output declined by 6%, or 68 kt. Production cuts were taking place at the following plants:

- Queensland Nickel Yabulu refinery in Australia and Votorantim in Brazil, which suspended the operations as unprofitable;
- Plants of Nornickel and France's Eramet due to capacity reconfiguration underway;
- Chinese refined nickel producers as a result of the lack of nickel feedstock following the closure of loss-making mines: Ban Phuc in Vietnam, Aguablanca in Spain, Santa Rita in Brazil, and a range of mines in Australia;
- Sherritt's Ambatovy (Madagascar) as a result of technical problems.

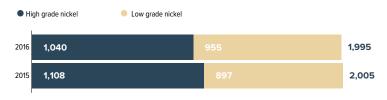
However, some producers (BHP Billiton and Glencore) increased their capacity utilisation in order to optimise cash costs while nickel prices are low.

The decline in high grade nickel output in 2016 was fully offset by the rise in the production of low grade commercial nickel (up 6.5%, or 58 kt). The latter was mostly driven by the launch of new smelting capacities to produce NPI in Indonesia as a result of capacity ramp-up at projects that went into commercial production in 2015, such as Tsingshan and Zhenshi Gebe, and new NPI facilities put on stream in 2016, which did not only offset the production cuts in China in 2016 caused by the lack of the Philippine ore and toughened environmental laws in China, but also contributed to an overall increase in global production of low grade nickel.

On a side note, Chinese producers, struggling amid low lateritic ore supplies to produce NPI and also suffering from declining nickel content in the Philippine ore, in 2016 began using nickel sulphide concentrate: after the roasting stage, it was mixed with lateritic ore to increase nickel content for NPI production. By the same token, in 2016 Chinese producers started adding nickel cathodes to the melted substance as a way to increase nickel content in the NPI production process. These new trends emerging in the market are blurring the traditional distinction between production and consumption of high grade and low grade nickel, and also nickel made of sulphide and lateritic nickel ore.

The most important factor influencing the low grade nickel production in 2016 was the government-run environmental audit of all mining facilities in the Philippines. After unprocessed ore exports from Indonesia were banned in 2014, the Philippines became the world's largest exporter of commercial nickel ore, which is the key feedstock to produce NPI in China. Following the audits, the Philippines' Department of Environment and Natural Resources ordered the closure (or suspension) of mining operations at most of the nickel mines in the country (that combined make up almost half of the Philippines' total production in 2016), which will limit the resources available to NPI producers in China.

#### Primary nickel production in 2015–2016, kt of Ni units



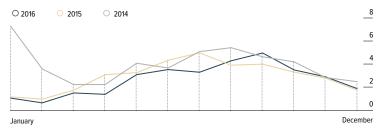
Source: Company data





Source: Company data

#### Chinese nickel ore and concentrate imports in 2014–2016, mln t



Source: Company data

/ Global Metals Market /

#### KEY TRENDS IN THE COPPER MARKET

**2016:** the prices surged in the second half of the year driven by the strong demand from China, the Trump factor, and supply disruptions.

**Outlook: neutral.** At spot price, over 90% of the total capacities are profitable. The market will remain balanced going forward, with supply disruptions and stronger demand from China acting as potential positive price drivers.

Early in 2016, copper prices kept declining, In mid-January hitting the seven-year low of USD 4,310 per tonne by mid-January. From February, though, the market started to recover buoyed by the optimism on the back of stimulating measures in China and production cuts in Chile. The market responded positively to the election of Donald Trump as the new US President on 9 November taking in his promises to boost investment in the US infrastructure. As a result, copper quotes surged to a year high of USD 5,936 per tonne by the end of November, with the average copper price for the full year standing at USD 4,863 per tonne, down 12% y-o-y.

#### MARKET BALANCE

In 2016, the refined copper market was slightly oversupplied. The surplus was below 1% of the total market volume, or 170 kt, up 120 kt as compared to 2015. During the year, total exchange warehouse stocks went up from 483 kt to 548 kt (or from 8 to 9 days of consumption), with off-exchange inventories showing a moderate increase.

Surplus in the copper market, kt

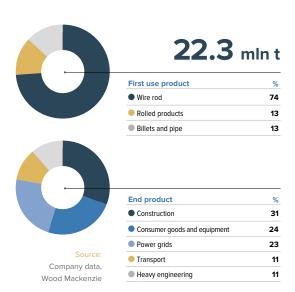


Source: Company data

No.12

Nornickel is the world's twelfth largest producer of copper

#### Refined copper consumption by industry

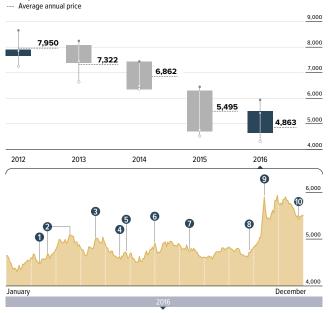


Given its high electrical and thermal conductivity, ductility and corrosion resistance, copper is widely used in various industries. Up to three quarters of refined copper produced globally are are used for manufacturing electrical conductors, including various types of cable and wire. Key copper-consuming industries include construction, electrical and electronic equipment manufacturing, power supply, transport, engineering, machine building and consumer goods production.

In 2016, global consumption of refined copper totalled 22.3 mln t (up 2.0%, or 0.43 mln t, as compared to 2015), primarily owing to stronger demand from cable and wire manufacturers. Consumption in pipe, flat rolled products and billet production segments saw moderate growth.

#### Copper prices, USD/t

- Price increase (start-end of the year)
- Reduction of price (start-end of the year)
- All-year high All-year low



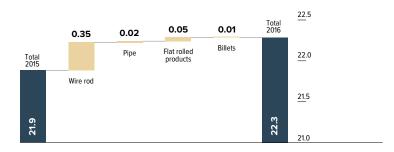
#### Drivers of the copper price in 2016

- 1. Production increase in Peru
- 2. China's SRB copper purchases
- 3. Suspended mining in Chile due to heavy rains
- 4. Rise in LME stocks
- 5. Strike at the Toromocho copper mine. Peru
- 6. Increase in Chinese copper concentrate imports
- 7. Stronger USD
- 8. Trump's election as the US President
- 9. Trump's promises to boost investment in the US infrastructure
- 10. Closing of long positions before the New Year

/ Global Metals Market / Copper

China remains the key copper consumer, with its market share reaching 48% in 2016 due to the demand growth of 4%. Market concerns about China's sharp economic slowdown did not materialise. China took advantage of low prices to significantly boost imports of copper and, in particular, copper feedstock. In 2016, refined copper imports grew by 3% to 4.9 mln t, while copper concentrate imports went up by as much as 28% to 17 mln t. This enabled China to meet its growing consumption needs through the local production ramp-up. The demand for copper in developed economies saw only a slight increase in 2016, with Europe (the Company's key market for copper cathodes) by 1.4%, North America by 0.3%, and Asia (excluding China) by 0.8%. Russian domestic copper cathode consumption in 2016 remained flat y-o-y.

Changes in refined copper consumption in 2016 by product,  $m \ln t$ 



Source: Company data, Wood Mackenzie

#### PRODUCTION

In 2016, global production of refined copper increased by 2.5% (or 0.55 mln t) compared to 2015 and totalled 22.5 mln t. China remains the key driver behind that growth, with the national government firmly committed to the expansion of domestic smelting and refining capacities, which, according to the Chinese experts, increased in 2016 by 0.4 mln t and 0.3 mln t to 6.5 mln t and 10.8 mln t, respectively. In 2016, refined copper production in China grew by 12% to 7.9 mln t, while its share in global output was 34%. Only one quarter of Chinese production is local extraction, with three quarters coming from imported copper concentrates and scrap. In the rest of Asia (excluding China) production growth was 7% (with Japan, Indonesia and the Philippines as the key contributors), while in North America it stood at 6% (up in the USA and Mexico and down in Canada).

Refined copper production in 2015–2016, mln t



Source: Company data, Wood Mackenzie

In 2016, global production of refined copper increased by

2.5%



In Europe and South America production went down by 1.7% and 1.5%, respectively, whereas in Africa the 10% decrease was due to reduced production in the Democratic Republic of Congo and Zambia. According to the preliminary estimates, Russia saw its production decline by 2% in 2016, to a certain extent due to the shortage of copper scrap used as a key feedstock by producers in the Urals.

In 2016, global copper mine production increased by 3.8% to 19.9 mln t. Additionally, approximately 2.6 mln t of refined copper (down 6% y-o-y amid low feedstock prices) was produced from scrap and concentrate stockpiles.

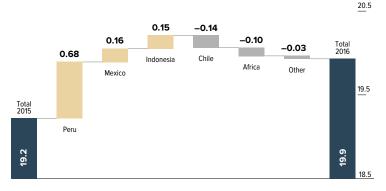
This production surge was mainly attributable to the explosive growth in Peru, the second largest copper producer after Chile, whose annual output spiked by 40%. The new Las Bambas mine acquired by the Chinese MMG from Glencore kicked off commercial production, which amounted to 0.28 mln t of copper in metal equivalent. Another major project was the doubling of copper production capacity at Freeport-McMoRan Inc.'s Cerro Verde mine in Peru to 0.5 mtpa.

Indonesia stepped up its output by 26% as a result of expansion at Grasberg mine run by Freeport-McMoRan Inc., while the permit for copper concentrate exports granted in 2H 2016 enabled the company to ship the entire output to overseas markets.

Mexico saw its production grow by 28% owing to the development of Buenavista, Southern Copper's major mine, which boosted copper output by 160 kt. Production in the USA increased by 4% as a result of the Bingham Canyon recovery and expansion at Morenci mine. In Kazakhstan, commissioning of the new Bozshakol mine by KAZ Minerals drove the output by 11%.

Production in Chile, the world's leading copper supplier, fell by 3% in 2016 on the back of an expected 15% decline at BHP Billiton's Escondida, the world's largest copper mine delivering lower copper grade heaps, along with a 3% decline registered by the state-owned Codelco that failed to raise sufficient financing to maintain production at its oldest mines.





Source: Company data, Wood Mackenzie

African production was down 5%, as, in late 2015, amid declining copper prices, Glencore announced an 18-month suspension of operations at its Katanga mine in the Democratic Republic of Congo and Mopani mine in Zambia to launch upgrade works. In Australia, copper output shrank by 5% following a widespread power outage that occurred as a result of storm damage.

While in the previous years the actual copper production growth was below the analyst expectations due to strikes, accidents, delays in the commissioning of new facilities, engineering and occasionally political issues, the reporting year saw way fewer emergencies and disruptions, with production exceeding the estimates by 0.5 mln t. However, an increase in concentrate production was offset by the relative shortage of copper scrap amid low market prices, which brought the refined copper output for the full year in line with January's analyst estimates. At the same time, consumption growth was slightly above the expectations, causing the surplus estimates to be revised down by 0.1 mln t.

In 2016, global copper production increased to



/ Global Metals Market /

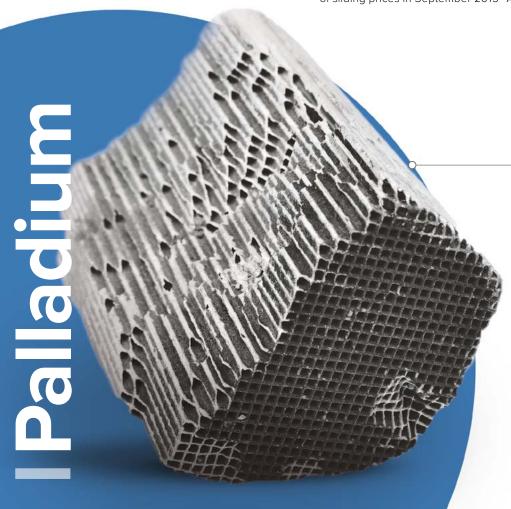
#### KEY TRENDS IN THE PALLADIUM MARKET

**2016:** impressive price recovery from the January lows on the back of sustainably high industrial demand

**Outlook: positive.** The marcet deficit to grow as a result of stable supply, growth of industrial consumption, and stabilised investor demand.

In January 2016, prices for platinum group metals tumbled to multi-year lows. Palladium prices went down to a five-year low of USD 470 per troy ounce. This continued the downward trend of late 2015 caused by the general weakness of commodity markets, no long-awaited closures of unprofitable South African mines, major investment outflows from palladium exchange-traded funds, and the strengthening of the US dollar against the production countries' currencies. Throughout the year, despite some large fluctuations, prices bounced back reaching maximum since May 2015 in late November (USD 770 per troy ounce) followed by a moderate year-end downward adjustment.

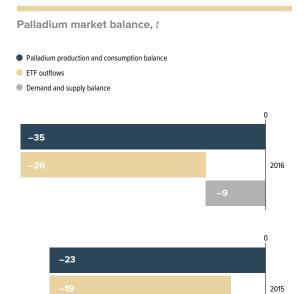
The positive trend throughout the year was driven by the unexpectedly high growth rates of car production in China (+14%) driven by the tax cuts for small engine cars, the growth in US car sales hitting a new record in 2016, and a reported drop in diesel car sales in favour of petrol vehicles with a higher share of palladium-based catalysts. Prices for PGM and other precious metals were also affected by the US Federal Reserve's cautious attitude towards rates hike, uncertainty following the unexpected Brexit vote, the growing demand for defensive assets, as well as the victory of Donald Trump and expectations of higher economic growth and auto sales in the USA. Despite the positive 2016 trend, the average annual palladium prices were at their lowest in six years (USD 613 per troy ounce) on the back of sliding prices in September 2015-August 2016.



No.1

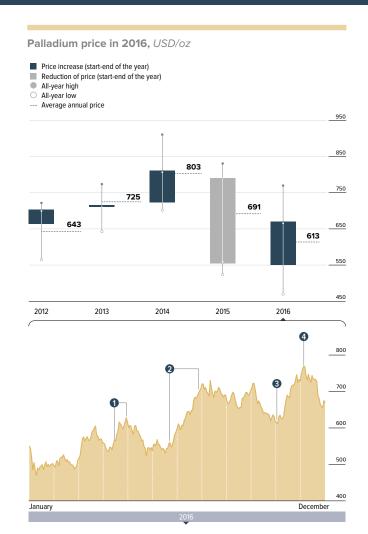
Nornickel is the world's largest producer of palladium





Source: Company data

In recent years, there has been a sustained undersupply in the palladium market covered by the consumption of reserves accumulated in previous periods. During the reporting period, this imbalance was partially offset by withdrawals from palladium ETFs, mainly in the second half of the year.



#### Drivers of the palladium price in 2016

- 1. Cautious Fed, weak US dollar
- 2. Rally in precious metals post-Brexit
- 3. US presidential election results
- **4.** The automotive industry statistics from China exceeded projections, rally after the Fed's interest hike

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/ Global Metals Market / Palladium

#### CONSUMPTION

Industrial consumption of palladium in 2016 increased by 8 t (+3% y-o-y) to an all-time-high of 316 t. With that, the primary palladium consumption increased by 10 t (+5% y-o-y) on the back of a 2 t decrease in scrap processing volumes, mainly, electronic scrap; automotive and jewellery scrap processing volumes remained flat. This continues the 2015 trend of decreased recycled metal supply in the market.

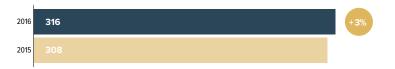
The automotive industry accounts for over three quarters of total palladium consumption. In this sector, palladium is used in catalytic converters to detoxify exhaust fumes. In most countries, such converters are legally required to be installed on all cars. Due to its unique catalytic properties ensuring effective chemical reactions throughout the entire vehicle life cycle (at least 150,000 miles in the USA), palladium has no substitutes except for platinum, which is more expensive and not economically justified due to the price gap between these metals, and rhodium, which, given the significant share of already produced vehicles and small market size (the world only produces 30 t of the metal) suffers from high price volatility and the risk of physical metal deficit.

In 2016, palladium consumption in the automotive industry grew by almost 10 t, reaching an all-time high of 246 t. The additional demand for the metal was mainly attributed to the growing car production in China (+14% y-o-y), India (+9% y-o-y) and recovery of production in Europe (+17% y-o-y). The US car market saw a modest growth in palladium consumption still hitting a new high since 2015. The increase in palladium consumption was also triggered by the growth of per-vehicle use, a trend that is likely to continue in the years to come due to toughened vehicle emission standards in certain countries.

Palladium consumption in the automotive industry will grow further. Hybridisation involving the use of petrol engines featuring palladium-based exhaust gas catalysts is slated to become a key trend in the development of environmentally friendly transport. Despite strong media attention, the leading analytical agencies forecast that the share of electric vehicles that do not require catalysts is unlikely to exceed 2% of global output by 2022, or 2 mln of electric vehicles against the annual global output of over 107 mln of vehicles. Palladium consumption in the electronics industry continued a moderate downward trend in 2016: lower use of palladium in multi-layer ceramic capacitors was partially offset by an absolute increase in their production and increased use of palladium in the connectors and lead frames.

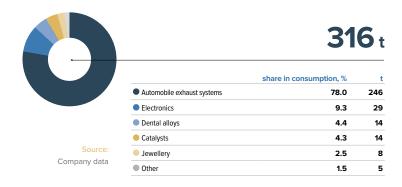
In the healthcare sector, primary palladium demand continued declining on the back of transition to alternative composites and dental scrap processing. While palladium has a number of advantages for jewellery manufacturing, its consumption in the industry dropped by 0.7 t (9%) in 2016 because it does not have a strong brand as a jewellery metal. After a continued fall in palladium consumption in China, now it is used mainly in white gold alloys or for wedding rings (in its pure form), mainly in the European and US markets. The 2016 primary palladium consumption in the production of

Palladium consumption in 2015–2016, t

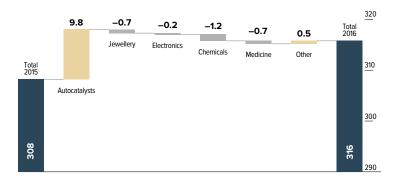


Source: Company data

#### Palladium consumption in 2016 by industry



Changes in palladium consumption by application area,  $\boldsymbol{t}$ 

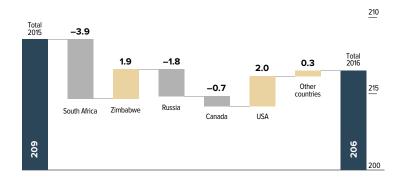


chemical catalysts decreased by 8% as a result of China's chemical industry slowdown on the back of delayed capacity expansion, increased life cycle of catalysts used in the terephthalic acid production (feedstock to produce fibres, food containers, photo and video films), and reduced palladium content. 2016 saw lower investor demand for palladium. Investor withdrawals from palladium ETFs (mainly in the second half of the year) totalled 20 t. This reduction resulted from the profit taking that followed a significant price surge coupled with investor migration to stocks. Investors are generally positive on the palladium market: as at the end of the reporting period, net speculative positions in palladium on the New York Mercantile Exchange and the Tokyo Commodity Exchange were +47 t. Additional retail demand for palladium bars accounted for 1 t

#### PRODUCTION

Despite the challenging market conditions and a considerable number of unprofitable mines, 2016 saw only a moderate decline in primary palladium output by key producers. In South Africa, the output of palladium declined primarily due to repairs of a smelter at Anglo American Platinum and scheduled closure of unprofitable shafts at Lonmin. This reduction was partially offset by the launch of new projects, such as Platinum Group Metals (Maseve), and higher output by Northam. Russia recorded a lower output due to the planned reconfiguration of the Company's production facilities. Zimbabwean production grew thanks to restored output volumes at Zimplats. There was also a slight improvement in US output. As a result, global output of primary platinum in 2016 decreased by 3 t, or 1% y-o-y.

Annual primary palladium output in 2015–2016, t



Source: Company data

The main sources of recycled palladium are used exhaust gas autocatalysts, as well as jewellery and electronic scrap. In 2016, recycled output shrank by 3 t, primarily due to reduced collections of electronic scrap as palladium contents lowers because of component miniaturisation. Collection of end-of-life automotive catalysts remained in the lower range owing to low PGM prices.

The sources of previously accumulated palladium stockpiles include trading companies, financial institutions, government reserves, and surplus inventories of consumers. In the 1990s and 2000s, Russia's palladium supply came primarily from the country's government stockpiles. Supply of palladium from these stockpiles had long been the main driver of market surplus. In recent years, Russian stockpiles ceased to be part of the palladium supply, which points to their depletion and marks the transition towards a palladium market that is completely market-driven.

/ Global Metals Market /

#### KEY TRENDS IN THE PLATINUM MARKET

**2016:** strong industrial consumption and support on the investor demand side.

**Outlook: neutral.** In 2017, the market will remain balanced state on the back of stable supply, recovering jewellery demand, but weaker industrial consumption.

In January 2016, platinum prices fell to a seven-year low last seen during the global financial crisis of 2008–2009. This development was caused by the overall downward trend in the commodities market on the back of a strong US dollar and repercussions of the Volkswagen diesel emissions scandal, which had an adverse impact on investor sentiment about the future of diesel vehicles. The ongoing unprofitable mines production and stable metal supply put additional pressure on prices.

Later on, in the first half of the year, when the US Federal Reserve left rates unchanged and investors fled to the safety after the unexpected Brexit vote in the UK, platinum prices bounced back reaching their maximum since May 2015 in August (USD 1,182 per troy ounce). This was followed by a downward movement, with prices falling to the levels of the beginning of the year (USD 900 per troy ounce) affected by the negative news about a slump in diesel car sales, low demand for platinum from the jewellery sectors in China and India, and an expected surplus in the metals market in 2017. The average platinum price in 2016 was at its eleven-year low (USD 989 per troy ounce).





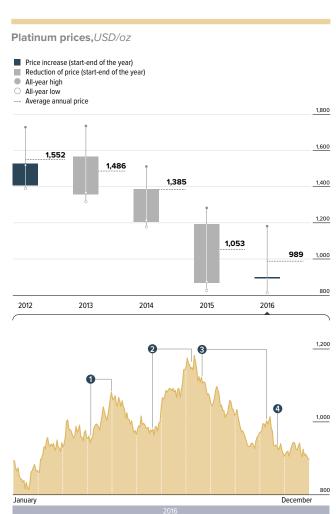


Accumulation of investment stocksProduction/consumption balance



Source: Company data

The deficit in the platinum market increased in 2016 compared to 2015, driven primarily by the growth in consumption that exceeded platinum production, and discontinued outflow from exchange-traded funds (ETFs).



#### Drivers of the platinum price in 2016

- 1. Cautious Fed, weak US dollar
- 2. Rally in precious metals post-Brexit
- Negative background related to the declining share of diesel cars in major markets, waning jewellery demand in China and India, and expected market surplus in 2017
- 4. US presidential election results

/ Global Metals Market / Platinum

#### CONSUMPTION

Industrial consumption of platinum in 2016 increased by 4 t (+2% y-o-y) to an all-time-high of 251 t, while the consumption of primary platinum remained flat at 193 t mainly due to the use of jewellery scrap, with recycling volumes remaining the same despite weaker demand.

The automotive industry is the largest consumer of platinum. Over 70% of platinum in this industry is used to manufacture exhaust gas catalysts for diesel vehicles. In 2016, the industry's consumption increased by 3 t fuelled by growing diesel car production and tightening environmental standards. At the same time, the reporting period was affected by the consequences of the 2015 scandal around Volkswagen manipulating vehicle emission tests to demonstrate environmental compliance. Many car manufacturers, including Volkswagen, which became the world's largest automaker in 2016 by the number of cars manufactured, announced plans to reduce the share of diesel sales and to shift to hybrid (combining petrol and electric engines) and, ultimately, fully electric propulsion systems. Governments and municipalities of a number of nations, including key diesel engine markets such as the UK, EU and India, announced plans to restrict the use of diesel vehicles in large cities. These developments affected consumer behaviour, especially in the EU, where diesel's market share fell below 50% for the first time in years. The leading analytical agencies have revised downwards their forecast regarding the share of diesel vehicles in production. Yet, in absolute terms, manufacturing of this type of vehicles will continue to show a positive trend in the nearterm.

The second biggest platinum consumer is the jewellery industry. In 2016, its consumption rates decreased significantly (by 6 t, or 7% y-o-y), primarily due to weaker consumption in China and India. In China, a decrease in consumption was caused by the overall contraction of jewellery demand on the back of lower consumer confidence, high stockpiles of precious metals accumulated in 2015, and consumer shift to white gold owing to an aggressive marketing campaign. A drop in platinum consumption by the Indian jewellery industry comes as a result of higher import duties on gold and platinum, new requirement to identify buyers of expensive jewellery, and the currency reform in the country.

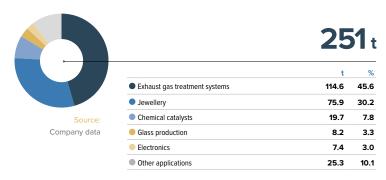
In 2016, primary platinum consumption for industrial catalyst manufacturing increased by 2 t, following the ramp-up of catalytic reforming, isomerisation, nitric acid and silicone production capacities, as well as the launch of plants to produce paraxylene used in China for paint and varnish manufacturing and propane dehydrogenation purposes.

Platinum consumption in 2015–2016, t



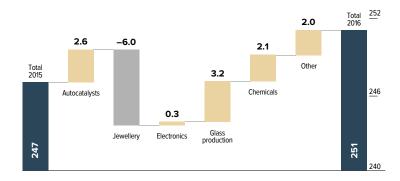
Source: Company data

#### Platinum consumption by industry



Source: Company data

Changes in platinum consumption by application area, t



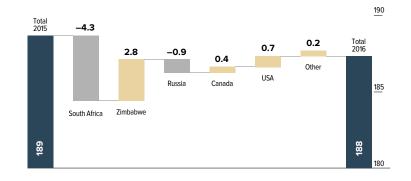
Source: Company data

The glass industry needs platinum to produce glass fibre and optical glass used in the LCDs of the majority of electronic products. The demand for the primary metal in this industry continued recovering after the decline of 2012–2013.

The electronics industry saw a modest growth in primary platinum consumption triggered by the increase in the platinum-based hard drive production due to the expansion of remote data storage capacities.

Platinum is also widely used as an investment instrument. Physical investments may vary from coins and smaller bars to investments in ETFs that accumulate large amounts of platinum in the form of standard-sized bars. 2016 brought considerable retail demand for platinum bars in Japan (13 t) driven by low JPY prices for the metal and a discount to gold. Investments in platinum ETFs for the full year remained flat.

Primary platinum production in 2015–2016, t



Source: Company data

#### PRODUCTION

In 2016, global primary platinum output decreased by 1t, or 1%, compared to 2015.

In South Africa, the output of refined platinum declined due to the maintenance at one of Anglo American Platinum's smelters and the scheduled closure of unprofitable shafts at Lonmin. This reduction was partially offset by the launch of new projects and higher output by Northam.

Russia recorded lower output, primarily as a result of a drop in Russian Platinum production volumes.

Zimbabwean production grew thanks to restored operations at Zimplats. There was also a slight improvement in the US production numbers.

The main sources of recycled platinum are used exhaust gas catalysts and jewellery scrap. Recycled output in 2016 increased by 4 t chiefly due to higher jewellery scrap volumes. Collection of autocatalyst scrap remained flat, as low platinum prices put pressure on recycling volumes, but growing prices of scrap steel and higher recycling volumes of European diesel cars with a high platinum content in the catalysts have offset this negative trend.

The sources of previously accumulated platinum stockpiles include trading companies, financial institutions, and surplus inventories of consumers, while the movement of these inventories is non-transparent.

Platinum is used in production of glass fibre and optical glass used in the LCDs of the majority of electronic products.



#### TAIMYR PENINSULA

(Norilsk Nickel's Polar Division)



Norilsk Nickel's Polar Division holds licenses to develop three copper-nickel sulphide deposits on the Taimyr Peninsula. Those include Talnakhskoye and Oktyabrskoye Fields (jointly the "Talnakh Ore Cluster"), and the Norilsk-1 Field (part of the Norilsk Ore Cluster).

The Company has a strong potential to maintain the current level of ore reserves given the significant mineral resources available within the existing mining operations. The depleted rich and cuprous ore reserves at the existing mines are mainly replaced through inferred resources on the flanks of the developed fields.

The Company plans to ramp up its mining operations by tapping into new rich ore deposits and focusing on the gradual and active development of disseminated and cuprous ore horizons. The Company will leverage the approved projects to develop new deposits and horizons in the Talnakh Ore Cluster and promising geological exploration data to ensure a sustainable mineral resource base going forward.

Proven and probable reserves

695 mln t of ore (Cu) ~11.8 mln t

3.9 kt 123.8 mln oz

Measured and indicated mineral resources >1,719 mln t of ore

(**Ni** ) 12.0 mln t

(Ni ) > 6.4 mln t

(Cu) 22.3 mln t

**PGM**) 8.2 kt √262.7 mln oz

Changes in on-balance reserves in 2016<sup>1</sup>

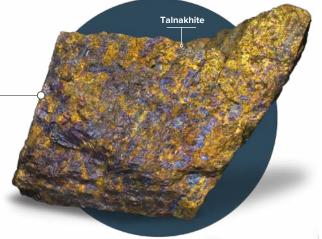
**Depleted** 

Ni — 243.7 kt Cu — 418.6 kt 80,4 mIn t of ore average metal content

Ni — 0.41% Cu — 0.48%

PGM — 4.73 g/t

Norilsk-1 is the oldest ore field of Norilsk. It hosts approximately 60 ore minerals with around 25% of them being exotic minerals, including those belonging to the platinum and gold groups.



According to the classification of reserves and prognostic resources of solid minerals approved by Order No. 278 of the Russian Ministry of Natural Resources and Environment dated 11 December 2006

<sup>2</sup> As a result of operational and follow-up exploration, and re-estimation of reserves within the boundaries of the fields under exploitation (Oktyabrskoye, Talnakhskoye, Norilsk-1)

/ Business Overview / Mineral resource base

#### **KOLA PENINSULA**

(Kola MMC)



Severny Mine was allotted to develop Pechenga ore fields (the Kola Peninsula), including Zhdanovskoye, Zapolyarnoye, Kotselvaara-Kammikivi, and Semiletka (Kaula-Kotselvaara mine) Fields. In addition to those, Severny Mine's allotment also embraces Sputnik, Bystrinskoye, Tundrovoye, and Verkhneye Fields.

The copper-nickel reserves of Zhdanovskoye, Zapolyarnoye, Kotselvaara-Kammikivi and Semiletka were further explored and assigned higher classification categories.

Proven and probable reserves

~133 mln t of ore





Measured and indicated resources

340 mln t of ore





Changes in on-balance reserves in 2016<sup>1</sup>

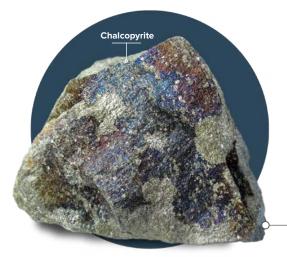


Ni — 44.8 kt Cu — 18.7 kt



**Upgraded to a higher** 

average metal content Ni — 0.63% mIn t of ore



In the long term, the Kola Peninsula's available mineral resource base will allow Norilsk Nickel to maintain its current level of metal output.

According to the classification of reserves and prognostic resources of solid minerals approved by Order No. 278 of the Russian Ministry of Natural Resources and Environment dated 11 December 2006

<sup>&</sup>lt;sup>2</sup> At the Zhdanovskoye, Zapolyarnoye, Kotselvaara-Kammikivi and Semiletka Fields

#### TRANS-BAIKAL TERRITORY

(Bystrinskoye Mining Company)



Consolidated Financial Statements

#### **Bystrinskoye Field**

In 2016, the Group mined 1,893 kt of balance goldiron-copper ores at Bystrinskoye Field.

#### **Bugdainskoye Field**

The Bugdainskoye molybdenum deposit is located in the Alexandrovo-Zavodsky District of Trans-Baikal Territory. Geological exploration of the Bugdainskoye Field sought to prepare it for commercial development. In 2007, the State Reserves Commission confirmed the availability of B +  $C_1$  +  $C_2$  reserves. In 2010–2012, the Company conducted an engineering survey of the Bugdainsky Mining and Processing Plant with a special focus on access roads and facilities along with laboratory research capacities. 2013 saw the launch of the development project on the Bugdainskoye Field. In 2014, faced with low international molybdenum prices, the subsoil user suspended its right to develop the Bugdainskoye Field for three years.

Bystrinskoye Field – Reserves<sup>1</sup>

286 mln t of ore

2,037 kt

33,558 koz





Bugdainskoye Field – Reserves<sup>1</sup>

812 mln t of ore

600 kt

6,221 koz

360 koz

#### AUSTRALIA

(Norilsk Nickel Cawse)

The Group holds a licence to develop Honeymoon Well Project including:

- fields with disseminated nickel sulphide ores (Hannibals, Harrier, Corella and Harakka);
- Wedgetail Field hosting solid and vein ores.

Measured and indicated resources

**173** mln t of ore



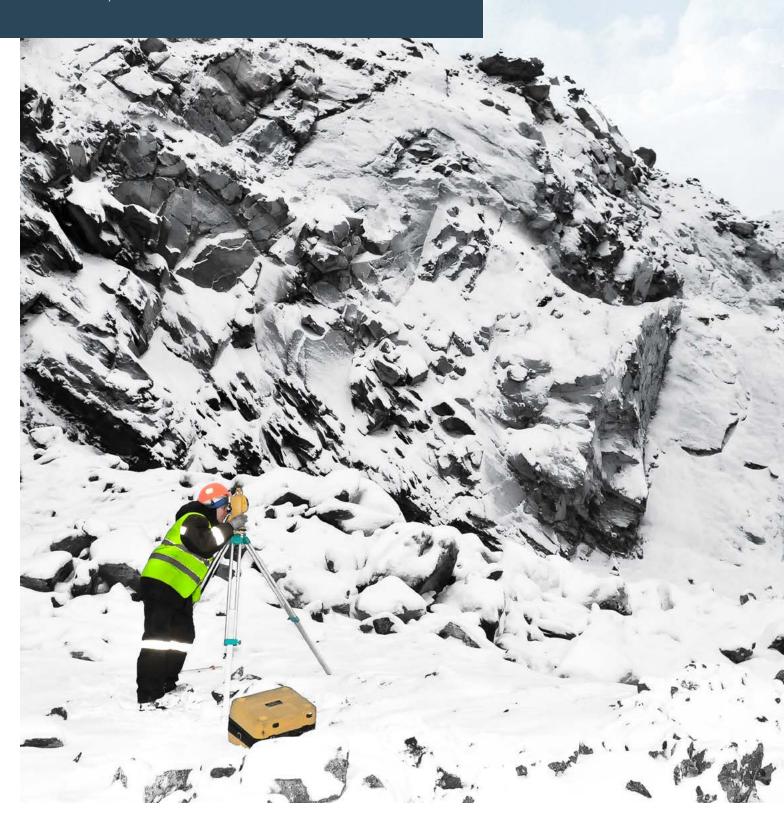
0.68%

 $<sup>^{1}</sup>$  Balance reserves B + C $_{1}$  + C $_{2}$ 

/ Business Overview

# Geological exploration

Geological exploration is one of Nornickel's core businesses ensuring sustainable extraction volumes and an optimal structure of mineral reserves.



#### TAIMYR PENINSULA

(Norilsk Nickel's Polar Division)

Exploration is underway at Maslovskoye Field, deep horizons and flanks of the Oktyabrskoye and Talnakhskoye Fields, and the northern flank of Norilsk-1 Field. Industrial limestone was prospected and appraised in the Verkhne-Tomulakhskaya Area of the Norilsk Industrial District.

In 2016, the Company also kept prospecting for sulphide ores in Lebyazhninskaya, Razvedochnaya, Mogenskaya, Khalilskaya, Nizhne-Khalilskaya and Nirungdinskaya Areas of the Norilsk Industrial District, 150 km south-east of Norilsk.

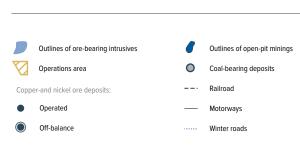
#### Maslovskoye Field

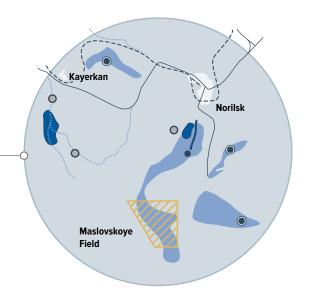






The Field is located in the Norilsk Industrial District, 12 km south of Norilsk-1 Field





Global estimated reserves of disseminated ores make it possible to classify Maslovskoye Field as one of the largest platinum-copper-nickel deposits. Areas of rich ore veins were found in the disseminated ores of this field. In 2015, the Group was granted a license to explore and mine copper-nickel sulphide ores.

In 2016, exploration project for Maslovskoye Field was prepared and reviewed by dedicated bodies. A feasibility study of permanent exploratory standards is underway.

#### Balance reserves of Maslovskoye Field

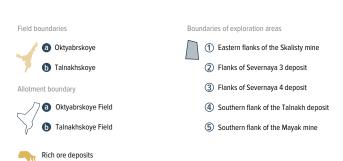
,		
Metal	$\mathrm{C_1} + \mathrm{C_2}$ mineral reserves	Metal content in ore
Ore (mln t)	215	
Palladium (koz)	32,262	4.56 g/t
Platinum (koz)	12,479	1.78 g/t
Nickel (kt)	728	0.33%
Copper (kt)	1,122	0.51%
Cobalt (kt)	34	0.016%
Gold (koz)	1,304	0.19 g/t

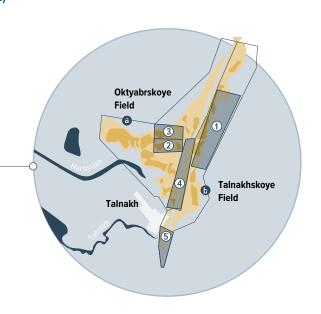
/ Business Overview / Geological exploration

#### Flanks and deep horizons of the Talnakhsky Ore Cluster (copper ores)



The Group's geological exploration of the unregistered reserves focuses on the follow-up exploration of rich and cuprous ores at Oktyabrskoye and Talnakhskoye Fields.





#### Taimyrsky and Skalisty Mines

Geological exploration (follow-up exploration) is underway in the northern flanks of Taimyrsky Mine and eastern flanks of Skalisty Mine to properly assess the boundaries of the producing deposits and convert  $\rm C_2$  reserves to the  $\rm C_1$  category. This has already resulted in reassessing 9,983 kt of coppernickel reserves of the Severnaya 3 deposit.

#### Norilsk-1 Field

Exploration completed at the shaft pillar of Norilsk-1 Field. Off-balance reserves in the amount of 25.5 mln t as entered into the government books were converted from the underground mining reserves into reserves intended for open pit operations.

#### Reserves re-entered into the government books

Metal	Inventories
Ore, mln t	11.8
Nickel, kt	352.8
Copper, kt	435.3
PGM, t	100.6

 $A + B + C_1 + C_2$  copper-nickel reserves entered into the government books in 2016

Metal	For open-pit mining	For underground mining
Ore, mln t	96.5	4.4
Nickel, kt	253.3	13.4
Copper, kt	310.6	15.2
PGM, t	421.4	21.5

Reserves entered into the government books in 2016

11.8 mln t of ore

Reserves Cu-Ni ores entered into the government books

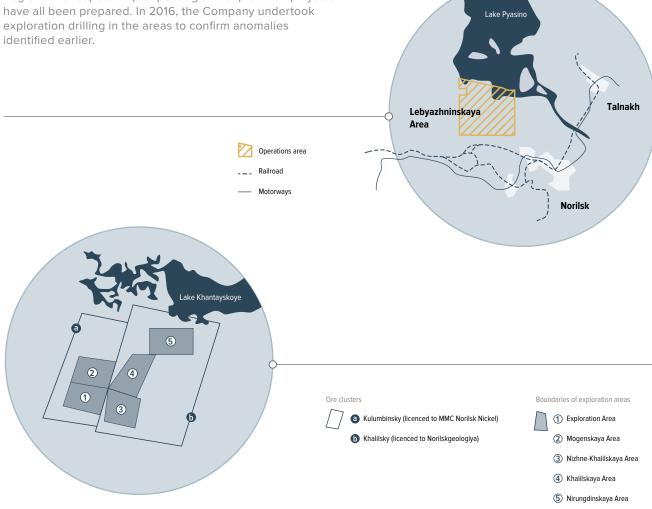


# Ni

Prospecting and appraisal of new copper-nickel sulphide ore fields



In 2014, the Company received licenses permitting it to use subsurface for geological exploration for the purpose of prospecting and appraisal copper-nickel sulphide deposits in Lebyazhninskaya, Razvedochnaya, Mogenskaya, Khalilskaya, Nizhne-Khalilskaya and Nirungdinskaya Areas in the Dolgano-Nenets municipal district of the Krasnoyarsk Region. The respective prospecting and exploration projects have all been prepared. In 2016, the Company undertook exploration drilling in the areas to confirm anomalies



#### Limestone prospecting and appraisal in Verkhne-Tomulakhskaya Area

The license block is located in the Taimyrsky Dolgano-Nenetsky Municipal District and borders the northern part of the Talnakh District. The central point of the Area is 10 km away from the industrial facilities of Oktyabrsky and Taimyrsky Mines.

The Company appraised the Area, developed the permanent exploratory standards, and prepared a mineral reserves estimation report. In 2016, C<sub>1</sub>+ C<sub>2</sub> limestone pit reserves totalling 116,686 kt were entered into government books. A certificate confirming the discovery of the Mokulaevskoye limestone deposit was issued to Norilsk Nickel. Upon the discovery, the Company applied for the relevant exploration and mining licence.

/ Business Overview / Geological exploration

#### **KOLA PENINSULA**

(Kola MMC)1

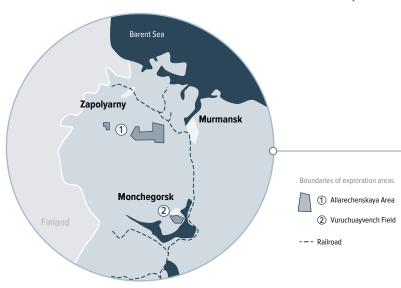
#### Allarechenskaya Area

In 2010–2014, the Company completed geological and geophysical ground surveys and drilling operations in the Area, but did not identify any cost-efficient commercial deposits. In 2016, no geological exploration was conducted; the licence period for the Allarechenskaya Area ended on 31 December 2016.

#### **Vuruchuayvench Field**

The Vuruchuayvench platinum-group metal deposit is located in the central part of the Kola Peninsula and Murmansk Region, 10 km from Monchegorsk and 5 km from the industrial site of the Severonickel Plant owned by Kola MMC.

In 2016, due to the unfavourable economic environment, the Company decided to renounce its subsoil use rights to explore and develop the Vuruchuayvench Field.



#### TRANS-BAIKAL TERRITORY

(Bystrinskoye Mining Company)

Geological exploration in the Trans-Baikal Territory is aimed at developing and maintaining the mineral resource base of both the Company and the Chita project.





<sup>&</sup>lt;sup>1</sup> In 2016, no geological exploration was conducted on the Kola Peninsula.

#### **Bystrinskoye Field**

The Bystrinskoye Field is located in the Gazimuro-Zavodsky District of Trans-Baikal Territory. The closest residential areas are Novoshirokinsky, 14 km north-east of the field, and Gazimursky Zavod, a district centre 25 km to the north-west.

In 2015–2016, to increase the volume of development-ready reserves on the flanks and deep horizons of the field, the Company launched a follow-up exploration exercise. Drilling showed that the commercial mineralisation extended into both flanks of the explored areas and deep horizons.

#### Bystrinsko-Shirinskoye Field

The Bystrinsko-Shirinskoye Gold Field is located in the Gazimuro-Zavodsky District of Trans-Baikal Territory, 24 km south-east of Gazimursky Zavod. The Bystrinsko-Shirinskoye licence block is adjacent to Bystrinskoye Field.

In 2015–2016, the Company launched a pilot mining project on the Field using in-situ chlorination.

#### Zapadno-Shakhtaminskaya and Tsentralno-Shakhtaminskaya Areas

In 2015, the Company obtained a subsoil exploration licence to prospect for and appraise deposits of copper, gold, iron and associated minerals in Zapadno-Shakhtaminskaya and Tsentralno-Shakhtaminskaya Areas.

These areas are located in the south-eastern part of Trans-Baikal Territory, 22 km away from the Borzya – Gazimursky Zavod railway, and

span the Alexandrovo-Zavodsky, Shelopuginsky and Gazimuro-Zavodsky Districts. The licence blocks are located in immediate proximity to the well-developed infrastructure of the former Shakhtaminsky mine, with the settlement of Vershino-Shakhtaminsky sitting right in the middle of the area

In 2016, the Company launched a comprehensive prospecting and exploration project in the area, including geochemical and geophysical operations and geological traverses. A number of prospecting gold-copper mineralisation areas were identified; further prospecting is currently underway.

#### Chingitayskaya Area

In 2015, the Company obtained a subsoil exploration licence to prospect for and appraise deposits of copper, gold, molybdenum and associated minerals in Chingitayskaya Area. The Area is located in the Alexandrovo-Zavodsky District of Trans-Baikal Territory, 25 km north-west of the district centre. Near the licence block, some 3 km to the south, there is a Borzya – Alexandrovsky Zavod asphalt road (managed by the territorial government) and the Borzya – Gazimursky Zavod railway. In 2016, the Company launched a comprehensive prospecting and exploration project in the area, including geochemical and geophysical operations and geological traverses, which showed no potential for discovering an iron-copper-skarn field in the area.



(Norilsk Nickel Cawse)

#### **Honeymoon Well Development Project**

In 2016, geological exploration under the Company's Australia licences focused on the Honeymoon Well Nickel Project (Wedgetail, Hannibals, Harrier, Corella and Harakka Fields) and prospective Albion Downs North and Albion Downs South Areas.

The geological exercise featuring drilling operations identified a sulphide nickel mineralisation on the flanks and deep horizons of the Wedgetail Field. The results served as the basis for a feasibility study of the potential Wedgetail mining. The Company

also completed a technological research programme aimed at determining the talc content in ores mined at the Hannibals Field and assessing its impact on the processes.

In 2016, to further assess the potential of Albion Downs North, the Company launched electromagnetic geophysical ground surveys and desktop studies of chemical analytical data obtained earlier. The results were used to estimate the West Jordan site's resources and conduct a feasibility study for open-pit mining.

/ Business Overview /

# **Production**

#### MINING



#### **Stripping**

Provides access from the surface to the deposit through underground workings used to transport mined ore, people, etc.



#### **Development workings**

The deposit is divided into separate sections, including mining levels, blocks, sublevels, stoops, etc.



#### **Stoping**

- o separation of ore from the rock;
- delivery of ore from the mine face to the haulage level;
- maintenance of the excavated area.



#### **Rock mass removal**

Ore is removed by load-haul dumpers and delivered to the surface by conveyor, railway and motor vehicles, or through skip shafts.



# Prospective metal applications



#### Important today, essential tomorrow

Today, nickel has a multitude of applications in the production of industrial and consumer goods, construction, aviation, space and transport industries. It is essential for the production of lithium-ion batteries and makes them safer, longer-lasting, more energy efficient and suitable for electric cars, which are becoming increasingly widespread all over the world. Nickel is also an important component of materials used in 3D printing, a technology that has gained immense popularity over the past decade.



# At the core of infrastructure projects and transport electrification

In recent years, many leading world economies have been increasingly focused on new large-scale infrastructure projects as a platform for economic growth, new industrialisation and ramp-up of domestic industrial output. These projects are dependent on copper, a basic element in construction, power grid building, vehicle manufacturing and heavy engineering. Another important area for copper application is electric engine manufacturing: compared to conventional cars, their hybrid and electric counterparts use twice and thrice as much copper, respectively.



#### Key to environmentally safe hydrogen power

PGM serve as a platform for transition to environmentally safe and sustainable energy. Platinum is used in fuel cell engines, a new type of engine that converts the chemical energy of hydrogen into electricity. In these engines, platinum acts as a catalyst in the reaction between hydrogen and oxygen, which generates energy and water, its only by-product. Compared to conventional internal combustion engines, fuel cell ones offer zero emissions and doubling of efficiency. Thanks to a compact size, they are widely used in vehicle manufacturing, and at stationary hydrogen power plants that have been growing in number.

#### Safeguarding our health

Owing to their unique cytostatic properties, non-toxicity and hypoallergenicity, PGM are widely used in medicine, including complex electronic medical devices in lasting contact with a human body, such as pacemakers and glucose meters, and in dental prosthetics as a material for dentures. Medications based on isotopes of palladium and platinum are the game changers in conservative (non-invasive) treatment of cancer, especially prostate and breast cancer.

#### **ENRICHMENT**











Tailings to be transported to tailings pits

> Copper concentrate to be used in copper production



Talnakh Concentrator is the first Russian facility to be putting onstream three vertical fine grinding mills Vertimill VTM3000 by Metso Minerals.

35-50%

#### Crushing

surfaces of crushing machines

#### Screening

Granulated ore material is separated by particle

#### Grinding

Crushed ore is ground in mills providing a water solution (pulp)

#### Sizing

Ground ore is separated by size as a result of different

#### **Flotation**

suspended within the pulp attach to air bubbles, which leads to their separation





The construction of a tailings pit with a capacity of up to 230 mln t of tailings in the vicinity of Talnakh Concentrator is nearing completion

Ore mined at Nornickel's deposits are uniquely rich



For more details, please see the Mineral Resource Base section on page 44



# STRATEGIC PRIORITY: | Major upgrade of production capacities



For more details, please see Our Strategy section on page 22

#### Slag cleaning furnace

Re-extraction of metals from metallurgical furnace slag











Nickel concentrate to be used in nickel production

#### **Thickening**

Partial concentrate dehydration

#### **Concentrate drying**

Removal of moisture from concentrates (to a moisture level below 9%)

Smelting is achieved by mixing finely ground feedstock with a gaseous oxidiser, which holds melted metal particles suspended. The heat from oxidation reactions is actively used in the process

#### **COPPER PRODUCTION**



















**Electrolysis baths** 



Partial concentrate dehydration



The process of reducing the pulp's moisture level by forcing it through a porous medium

## Concentrate drying

Removal of moisture from concentrates (to a moisture level below 9%)

#### Vanyukov furnace

Uses the feedstock energy without any external power

#### Basic oxygen furnace

Oxidation and removal of slag iron and other contaminants

#### Anode electric furnace

Smelting of the fluidised bed furnace product to produce crude nickel anodes

#### Casting wheel

Casting of anode metal to the moulds to produce copper anodes

Nickel slag to be used

in nickel production

Sludge to be used in precious metals production







Electrochemical oxidation at the electrolyte-

immersed electrodes driven by the electric

current coming from an external source







to end consumers

## **Ore-thermal furnace**

Smelting occurs due to the heat released from passing electrical current through melted slag

#### Agglomeration

A method for forming relatively large porous blocks by roasting fine or

·B-----

## Filtration

The process of reducing the pulp's moisture level by forcing it through a porous



Kola MMC completed the transition from the obsolete pelletisation and roasting technology to the briquetting of copper-nickel concentrate. The introduction of the new feedstock preparation technology aims to improve environmental conditions in Zapolyarny.







Nickel slag to be used in nickel production







Kola MMC started migration to a ground-breaking electrowinning technology to reduce metal loss and emissions.

# RUB 18 bn

#### Basic oxygen furnace

Oxidation and removal of slag iron and other contaminants

Granulated slag is used to fill underground workings

#### Casting mould Converter matte is cast

into the moulds and cooled

# 789

Copper concentrate to be

used in copper production

# Crushing

Grinding Flotation

Oxidising concentrate roasting with conversion of metals from sulphides into oxidised powder

#### Anode electric furnace

anodes

# **Casting wheel**

Smelting of the fluidised bed furnace product to produce crude nickel anodes

Iron-cobalt alloy to be used

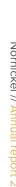
#### **Electrolysis baths**

Electrochemical oxidation at the electrolyte-immersed electrodes driven by the electric current coming from an external source



Kola MMC's Smelting Shop completed the overhaul of its ore-thermal furnace No. 5, which included the use of more reliable sealing technologies to reduce pollutant emissions and the facility's environmental footprint.









Casting of anode metal to the moulds to produce nickel

# in cobalt production



/ Business Overview / Production

#### **UPDATED STRATEGIC PLAN**

Under the updated strategic development plan of the Norilsk Nickel Group for 2016, the key tasks of the Operations Function were as follows:

- redefinition of the upstream project portfolio;
- operating efficiency improvement;
- portfolio assessment of the Group's production assets.

The redefined base strategic portfolio of Polar Division's Upstream is aimed at building a strong production profile to ensure efficiency improvements going forward. The base portfolio was updated to include the most attractive and highly profitable projects. The Company's next step will be to draft comprehensive mine development plans with potential involvement of additional reserves and resources. Current project portfolio is sufficient to ensure sustainable production volumes for the next 5–10 years.

The Company has developed and started implementing the Processing Capacities Reconfiguration Programme seeking to materially improve its upstream and downstream operating efficiency. In 2016, the Company commissioned Stage 2 of Talnakh Concentrator. The facility upgrade is going as planned, with the Nickel Plant shutdown completed by now.

The operating efficiency programme for 2015–2017 seeks to streamline the mining planning process, increase overall recovery rates for nickel, copper, cobalt, and PGM, re-process secondary resources (tailings, copper slags, and nickel bearing pyrrhotite with a low nickel content), and optimise the work-in-progress inventory levels. Other efficiency programmes include upgrade of nickel and cobalt production technologies at Kola MMC (completed), improvement of product quality and optimisation of production costs.

# THE RECONFIGURATION OF THE COMPANY'S SMELTING AND REFINING CAPACITIES AIMS AT

- Improving operating efficiency through a more balanced and fuller utilisation of capacities following the Nickel Plant shutdown (completed in August 2016),
- raming up of pyrometallurgical capacities at Nadezhda Metallurgical Plant (completed),
- reconstruction of nickel refining capacities at Kola MMC (2015–2018).

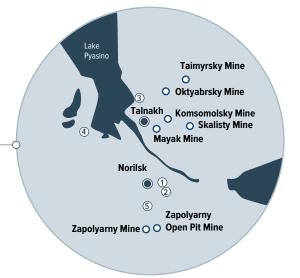
#### TAIMYR PENINSULA

(Norilsk Nickel's Polar Division)

Polar Division is located on the Russian Taimyr Peninsula (beyond the Arctic Circle at 69oN). It is linked to other regions by inland waterways (the Yenisey River), the Northern Sea Route and air.

- Residential Area
- 1 Copper Plant
- 3 Talnakh Concentrator

- O Mines
- 2 Nickel Plant (shut down in August 2016)
- Nadezhda Metallurgical Plant
- (5) Norilsk Concentrator



Additional Information



#### **Mining**

#### Mining assets

Field/Mine	Mine type	Ores <sup>1</sup>
Oktyabrskoye Field		Copper-nickel sulphide ores
Oktyabrsky Mine	Underground	Rich, cuprous and disseminated
Taimyrsky Mine	Underground	Rich
Talnakhskoye Field		Copper-nickel sulphide ores
Komsomolsky Mine <sup>2,3</sup> , including		
Komsomolskaya mine <sup>2,3,4</sup>	Underground	Cuprous and disseminated
Skalistaya mine <sup>2,3</sup>	Underground	Rich
Mayak Mine <sup>2,3,5</sup>	Underground	Rich and disseminated
Norilsk-1 Field		Copper-nickel sulphide ores
Zapolyarny Mine <sup>6</sup> , including		
Zapolyarny open pit	Open pit	Disseminated
Zapolyarnaya mine	Underground	Disseminated

Talnakhskoye and Oktyabrskoye Fields are developed by Taimyrsky, Oktyabrsky, Komsomolsky (including Komsomolskaya and Skalistaya mines) and Mayak Mines. Ores are extracted through slicing and chamber mining with flowable backfilling.

Norilsk-1 Field is developed by Zapolyarny Mine through open-pit and underground mining. Underground mining is carried out through sublevel (level) caving using front ore passes and mechanised vehicles.

Rich ores are characterised by a higher content of non-ferrous and precious metals; cuprous ores are characterised by a higher copper content vs nickel; disseminated ores are characterised by a

an 2010, the Talnakh Mining Administration was transformed into Komsomolsky Mine consisting of Komsomolskaya, Skalistaya and Mayak mines.

an 2015, Mayak mine was spun off from Komsomolsky Mine (consisting of Komsomolskaya, Skalistaya and Mayak mines) to become an independent operation, Mayak Mine. Komsomolsky Mine was

Komsomolskaya mine is responsible for the development of Talnakhskoye Field and the eastern part of Oktyabrskoye Field.

<sup>6</sup> In 2010, the Norilsk-1 Mining Administration was transformed into Zapolyarny Mine. Medvezhy Ruchey Mine was integrated into Zapolyarny Mine as Zapolyarny open pit.

#### / Business Overview / Production

#### Ore output, t

Field	Ore type	2014	2015	2016
Oktyabrskoye Field				
	Rich	1,891,800	1,682,250	1,294,200
Oktyabrsky Mine	Cuprous	2,938,400	2,982,700	3,038,820
	Disseminated	290,134	457,791	984,762
Taimyrsky Mine	Rich	3,614,544	3,713,600	3,545,686
Talnakhskoye and Oktyabrskoye Fields				
	Rich	1,041,521	1,112,021	1,314,425
Komsomolsky Mine	Cuprous	2,484,095	2,421,055	4,041,807
	Disseminated	2,035,231	1,535,514	0
Talnakhskoye Field				
Mayalı Mina	Rich	0	33,670	37,520
Mayak Mine	Disseminated	0	898,120	951,240
Norilsk-1 Field				
Zapolyarny Mine	Disseminated	2,748,718	2,490,848	2,035,750
	Rich	6,547,865	6,541,541	6,191,831
Total	Cuprous	5,422,495	5,403,755	7,080,627
iotai	Disseminated	5,074,083	5,382,273	3,971,752
	Total	17,044,443	17,327,569	17,244,210

In 2016, Polar Division's total ore output stood at 17.2 mln t, down 83.4 kt, or 0.5% y-o-y. The production of rich and disseminated ores declined by 15%, whereas the output of cuprous ores spiked by 31% thanks to higher volumes at Oktyabrsky and Komsomolsky Mines. The change in ore output was in line with the annual production plan.

#### Average metal content in ore, %

Metal	2014	2015	2016
Nickel	1.29	1.27	1.23
Copper	2.08	2.06	2.09
PGM, g/t	6.77	6.85	6.81

#### Ore production breakdown by metal content in 2016, %

Nr	0	Metal content in ore		
Mines	Ore output	Nickel	Copper	PGM
Oktyabrsky	30.9	26.5	44.1	39.6
Taimyrsky	20.6	41.0	26.3	17.7
Komsomolsky	31.0	27.4	24.1	29.3
Komsomolskaya mine	23.3	11.4	14.8	20.4
Skalistaya mine	7.7	16.0	9.3	8.9
Mayak	5.7	2.2	2.9	3.6
Zapolyarny	11.8	2.9	2.6	9.8
Total	100	100	100	100

#### Concentration

Concentration facilities:

- Talnakh Concentrator
- Norilsk Concentrator

Talnakh Concentrator processes rich and cuprous ores from Oktyabrskoye Field to produce nickel, copper and pyrrhotite concentrates. The key processing stages include crushing, breaking, flotation and thickening.

Norilsk Concentrator processes all disseminated and cuprous ores from Talnakhskoye and Oktyabrskoye Fields to produce nickel and copper concentrates. The key processing stages include crushing, breaking, gravitation and flotation enrichment, and thickening.

Thickened concentrates are transported via a pipeline from Talnakh and Norilsk Concentrators to the smelting facilities for further processing.

#### Metals recovery in concentration, %

Metal	2014	2015	2016
Nickel	82.0	81.3	77.1
Copper	95.8	95.5	94.2
PGM	81.4	79.3	77.7

In 2016, Polar Division's Production Association of Concentrators processed a total of

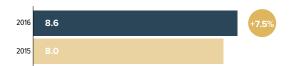
16.7<sub>mln t</sub>

of feedstock (including rich, cuprous and disseminated ores)

In 2016, sulphide ore processing volumes at Talnakh Concentrator were up 0.6 mln t y-o-y (8.6 mln t in 2016 vs 8.0 mln t in 2015). 1H 2016 saw the installation of new flotation machines, a semi-autogenous grinding mill (SAG), and fine grinding mills. From 2H 2016, Talnakh Concentrator has been fine-tuning the new technology, which temporarily reduced the recovery rates for 2016. On the flip side, higher nickel and copper content in the collective flotation concentrate, as a result of the upgrade, improved its overall quality as compared to 2015, with the nickel content growing by 0.6% (5.3% in 2016 vs 4.8% in 2015) and the copper content increasing by 2.2% (10.0% in 2016 vs 7.8% in 2015). In the reporting year, the rate of copper recovery in copper concentrate was up 3.2% y-o-y (82.2% in 2016 vs 78.9% in 2015).

In 2016, the ore processing volumes at Norilsk Concentrator were down 0.7 mln t y-o-y (8.1 mln t in 2016 vs 8.8 mln t in 2015), as cuprous ores from Oktyabrsky Mine were processed at Talnakh Concentrator. In 2H 2016, the disseminated ores branch of Norilsk Concentrator processed Copper Plant's low-grade ores as part of a pilot project, which helped to partially offset the loss of copper volumes from Oktyabrsky Mine. In 2016, nickel content in the collective concentrate produced at Norilsk Concentrator went up by 0.3% y-o-y (3.4% in 2016 vs 3.1% in 2015), while copper content remained almost flat (10.13% in 2016 vs 10.11% in 2015). Copper content in the copper concentrate increased by 0.4% (23.6% in 2016 vs 23.2% in 2015).

# Ore processing volumes at Talnakh Concentrator, $m \ln t$



# Ore processing volumes at Norilsk Concentrator, $m \ln t$



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#### **Smelting**

Smelting facilities:

- Nadezhda Metallurgical Plant
- Nickel Plant (shut down in August 2016)
- Copper Plant
- Smelting Shop (part of Copper Plant)

In 2016, the Company's smelting operations continued reconfiguring their production capacities, streamlining production processes and improving maintenance of the core production equipment.

In August 2016, Nickel Plant's Smelting, Roasting, Nickel Electrolysis, and Chlorine and Cobalt Shops were shut down in the Company's Polar Division. Nickel is now being refined at Kola MMC and Norilsk Nickel Harjavalta.

Prior to the Nickel Plant shutdown, Nadezhda Metallurgical Plant processed most of the nickel concentrate, nearly all of the pyrrhotite concentrate from Talnakh Concentrator, part of the nickel concentrate from Norilsk Concentrator, some of the pyrrhotite concentrate previously stored at Kayerkansky Open Pit Coal Mine (KUR-1) to produce converter matte and elemental sulphur. Pyrrhotite concentrate from Talnakh Concentrator and stored pyrrhotite concentrate from Kayerkansky Open Pit Coal Mine is further leached in Hydrometallurgical Shop to produce steam cured sulphide concentrate. Concentrate from Talnakh Concentrator, steam cured sulphide concentrate and stored pyrrhotite concentrate from Kayerkansky Open Pit Coal Mine are delivered to the flash smelting furnaces. The matte is then blown into high-grade converter matte. From 2H 2016, after the Nickel Plant shutdown, Nadezhda Metallurgical Plant's pyrometallurgical capacities have been processing all nickel-pyrrhotite concentrate from Talnakh Concentrator and nickel concentrate from Norilsk Concentrator, while the stored pyrrhotite concentrate from Kayerkansky Open Pit Coal Mine has been delivered for processing to its Hydrometallurgical Shop.

Prior to the shutdown, Nickel Plant processed nearly all of the nickel concentrate from Norilsk Concentrator, some of the pyrrhotite and nickel concentrates from Talnakh Concentrator, part of the pyrrhotite concentrate previously stored at KUR-1 and some of the converter matte from Nadezhda Metallurgical Plant to produce commercial nickel and cobalt.

Metals recovery in smelting, %

Metal	2014	2015	2016
Nickel	92.4	93.1	93.4
Copper	94.7	94.2	94.1
PGM	93.3	93.8	95.0

#### Metals output

Metal	2014	2015	2016
Nickel, t	122,390	96,916	50,860
Copper, t	297,552	292,632	280,347
Palladium, koz	2,065	1,935	1,703
Platinum, koz	500	488	449

Copper Plant processes all of the copper concentrate from Norilsk and Talnakh Concentrators to obtain commercial copper, elemental sulphur and sulphuric acid for production needs of Polar Division. Smelting Shop (part of Copper Plant) recycles sludge from Copper Electrolysis Shop and Nickel Electrolysis Shop (prior to the Nickel Plant shutdown) to produce concentrates of precious metals, silver metal and selenium.

Precious metals produced by Polar Division are refined at Krasnoyarsk Gulidov Non-Ferrous Metals Plant under a tolling agreement.

At Polar Division, metals are produced from its own raw materials. From Q4 2016, all nickel converter matte from Nadezhda Metallurgical Plant was processed at Kola MMC due to the Nickel Plant shutdown.

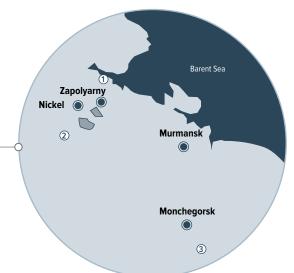
In 2016, the output of key metals at Polar Division was down compared to 2015. That was mainly attributable to the reconfiguration of production facilities, including the Nickel Plant shutdown and precommissioning operations at Talnakh Concentrator.

#### **KOLA PENINSULA**

(Kola MMC)

Located on the Kola Peninsula, Kola MMC is fully integrated into the transport infrastructure of the Northwestern Federal District as the leading industrial facility of the Murmansk Region.

Residential Area 1 Zapolyarny Concentrator Kaula-Kotselvaara Mine 2 Refining Plant Severonickel Plant, Smelting Shop, Refining Shop, Nickel Electrolysis Shop



Additional Information

#### **Mining**

Kola MMC is currently developing Zhdanovskoye, Zapolyarnoye, Kotselvaara and Semiletka Fields. Severny Mine (including Kaula-Kotselvaara mine) produces disseminated sulphide ores containing nickel, copper and other commercial components. Severny Mine leverages various ore mining methods as follows:

- Zhdanovskoye Field uses sublevel longwall caving with front ore passes, block caving (limited scope of application), and open-pit mining (at the open pit sections, for example, at Yuzhny Open Pit) methods.
- At Zapolyarnoye Field, in 1H 2016, ores were extracted through chamber mining with deep-hole stoping from sublevel drifts and flowable and dry backfilling.
- Kotselvaara and Semiletka Fields primarily use stoping from sublevel drifts and sublevel caving, as well as room-and-pillar short-hole and long-hole stoping (limited scope of application).

Kola MMC is the Company's second largest production asset.

#### Kola MMC mining assets

Field / mine (section)	Mine type	Ores
Zhdanovskoye Field		Copper-nickel sulphide ores
Severny open pit section	Open pit	Disseminated
Severny underground section	Underground	Disseminated
Zapolyarnoye Field		Copper-nickel sulphide ores
Severny underground section	Underground	Disseminated
Kotselvaara and Semiletka Fields		Copper-nickel sulphide ores

#### Ore output, mln t

•			
Field	2014	2015	2016
Zhdanovskoye Field			
Severny open pit section	476,833	558,418	459,707
Severny underground section	6,081,295	6,181,010	6,309,574
Zapolyarnoye Field			
Severny underground section	695,101	489,308	138,967
Kotselvaara and Semiletka Fields			
Kaula-Kotselvaara mine	787,935	733,490	707,270
Total	8,041,164	7,962,226	7,615,518

<sup>&</sup>lt;sup>1</sup> In December 2013, Kaula-Kotselvaara Mine was merged with Severny Mine and incorporated therein as Kaula-Kotselvaara mine.

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In 2016, Kola MMC's total ore output amounted to 7.6 mln t, down 347 kt, or 4% y-o-y.

The comparison of actual ore outputs in 2016 and 2015 shows:

- a 72% decline in Severny Mine's output at Zapolyarnoye Field due to additional development of the Field's balance ore reserves;
- a 4% decline in Kaula-Kotselvaara mine's output due to the five-day working week;
- the decline in output at Zapolyarnoye Field and Kaula-Kotselvaara mine in line with the mining plan for 2016.

#### Average metal content in ore

Metal	2014	2015	2016
Nickel, %	0.65	0.62	0.53
Copper, %	0.27	0.25	0.22
PGM, g/t	0.08	0.07	0.08

In 2016, Kola MMC's total ore output amounted to





#### Ore production breakdown by metal content, %

Mines		Metal content in ore		
	Ore output	Nickel	Copper	PGM
Severny Mine	100	100	100	100
Severny open pit section	6.0	4.0	4.5	2.7
Severny underground section (Zhdanovskoye Field)	82.9	80.9	78.0	67.8
Severny underground section (Zapolyarnoye Field)	1.8	4.6	4.8	9.2
Kaula-Kotselvaara mine	9.3	10.5	12.7	20.3

#### Concentration

Concentration facilities:

Zapolyarny Concentrator

The Concentrator produces briquetted copper-nickel concentrate. Nkomati concentrate also undergoes briquetting. Briquettes are delivered to Smelting to produce converter matte.

In 2016, Kola MMC's Concentrator processed 7.568 mln t of ore, down 282 kt y-o-y as a result of lower mining volumes.

In 2016, the rate of metals recovery in collective concentrate was below the 2015 level due to a higher content of hard-to-process finely disseminated and talcose ores in the ore mixture.

#### Metals recovery in concentration (ore to concentrate), %

Metal	2014	2015	2016
Nickel	72.4	72.7	69.0
Copper	75.2	76.0	73.6

In 2016, Kola MMC's Concentrator processed

7.6 mln t



#### **Smelting**

The refining facilities of Kola MMC in Monchegorsk process converter matte from Smelting Shop and Polar Division, and copper cake from Norilsk Nickel Harjavalta.

Precious metals produced by Kola MMC are refined at Krasnoyarsk Gulidov Non-Ferrous Metals Plant under a tolling agreement.

In 2016, Kola MMC produced more metals as compared to 2015. The main driver behind this growth was the increased converter matte supply from Polar Division owing to reconfiguration of the production facilities.

Smelting facilities:

- Smelting Shop (Nickel)
- Metallurgical Shop (Nickel)
- Refining Shop (Monchegorsk)
- Nickel Electrolysis Shop (Monchegorsk)

Metals recovery in refining, %

Metal	2014	2015	2016
Nickel	97.8	97.8	98.0
Copper	97.2	97.3	97.1
PGM	95.2	97.1	96.3

#### Metals output

Metal	2014	2015	2016
Nickel, t	106,048	125,100	131,235
including the Company's Russian feedstock	100,834	123,335	126,937
Copper, t	57,392	63,075	70,272
including the Company's Russian feedstock	48,345	60,134	63,542
Palladium, koz	595	671	851
including the Company's Russian feedstock	517	640	815
Platinum, koz	127	134	173
including the Company's Russian feedstock	95	122	159

#### FINLAND

(Norilsk Nickel Harjavalta)

Harjavalta processes the Company's Russian feedstock and nickel-containing raw materials sourced from third-party suppliers.

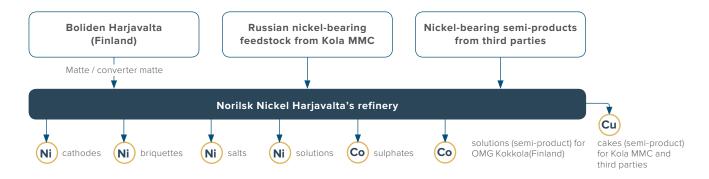
Norilsk Nickel Harjavalta has a total nickel processing capacity of 66 ktpa. The plant uses sulphuric acid leaching, the best-in-industry solution for nickel semi-products with the metal recovery rates of over 98%.

Norilsk Nickel Harjavalta's commercial products include nickel cathodes, briquettes and salts, and cobalt sulphates. The plant also manufactures semi-products, including PGM-bearing copper cake and cobalt solution for further processing by third parties.



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#### PRODUCTION FLOWCHART OF NORILSK NICKEL HARJAVALTA



From 2H 2016, the refining facilities in Monchegorsk have been gradually increasing their nickel feedstock supplies in line with the Group's nickel production reconfiguration strategy. Feedstock supplies from third parties continued unabated and included converter matte from BHP (Australia), matte and converter matte from Boliden Harjavalta (Finland), converter matte from BCL (Botswana), and nickel sulphide concentrate from Terrafame (Finland).

In 2016, Norilsk Nickel Harjavalta produced 53.7 kt of seleable nickel, up 23% y-o-y, owing to reconfiguration of the Company's refining facilities and, consequently, larger nickel feedstock supplies from Kola MMC.

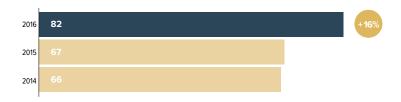
The third party sales of copper in copper cake totalled 9.6 kt, down 26% y-o-y. This was mainly due to the increased supplies to Kola MMC.

Nickel and copper recovery rates improved on the back of a decrease in losses of nickel and copper with ferrous cakes.

#### Metals recovery in smelting, %

Metal	2014	2015	2016
Nickel	97.1	97.8	98.3
Copper	99.3	99.6	99.7
Palladium	99.3	99.6	99.4
Platinum	99.3	99.6	99.4

Utilisation of refining capacities, % of max

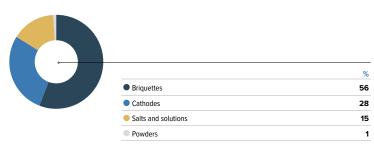


Seleable nickel production by Norilsk Nickel Harjavalta.

53.7



Seleable nickel produced by NN Harjavalta, %



Source: Company data

#### Metals production by Norilsk Nickel Harjavalta

Information for Shareholders

Metal	2014	2015	2016
Seleable nickel, t	42,603	43,479	53,654
including the Company's Russian feedstock	0	424	19,012
Copper in copper cake, t	10,629	13,048	9,598
including the Company's Russian feedstock	0	0	593
Palladium in copper cake, koz	71	78	64
including the Company's Russian feedstock	0	0	8
Platinum in copper cake, koz	31	33	22
including the Company's Russian feedstock	0	0	2

#### AFRICA

(Norilsk Nickel Nkomati)

Nkomati is a 50/50 unincorporated joint venture of the Norilsk Nickel Group and African Rainbow Minerals. It is located 300 km east of Johannesburg, Mpumalanga Province, South Africa.

Nkomati is the only nickel concentrate producer in South Africa. Apart from nickel, the concentrate produced by Nkomati contains copper, cobalt, chromium and PGM.

#### Production facilities:

- open pit and underground mines;
- MMZ Concentrator with installed capacity of 375 ktpm (up to 410 ktpm).
- PCMZ Concentrator with installed capacity of 250 ktpm (up to 300 ktpm).

#### **Production technology**

Nkomati has a substantial resource base represented by disseminated copper-nickel sulphide ores with several major ore bodies. The Main Mineral Zone is comprised of a solid sulphide ore body with a relatively high nickel content. The field also contains a Peridotite Chromite Mineralization Zone with a lower metal content vs MMZ and a relatively high chromium content.

The feedstock produced by open-pit and underground mining operations is processed at Concentrators using the method of sulphide floatation. The produced concentrate is then further processed at Boliden and Kola MMC.

#### Mining

In 2016, total ore mined by Nkomati reached 2.8 mln t (attributable to the Group's 50% shareholding) with an average nickel content of 0.37%. The Group accounted for 8.5 kt of nickel concentrate production, down as compared to 2015 due to lower mining volumes and decreased nickel content in processed ore.

#### Average metal content in ore, %

Metal	2014	2015	2016
Nickel	0.36	0.34	0.37
Copper	0.13	0.14	0.13

#### Concentration

Metals recovery in concentration, %

Metal	2014	2015	2016
Nickel	75.9	74.1	70.6
Copper	90.8	86.1	89.5

#### **Smelting**

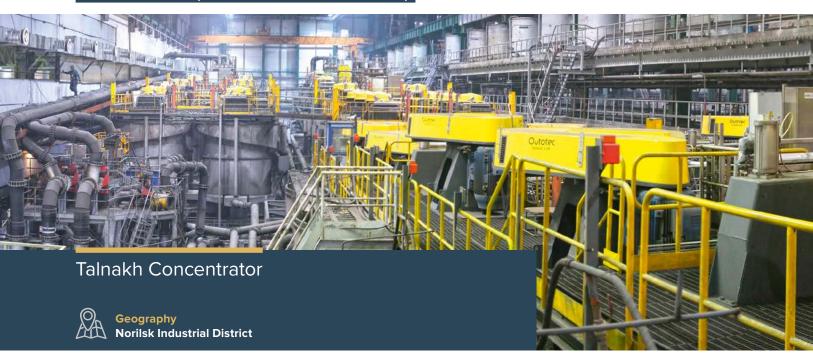
Metals production for Norilsk Nickel's internal processing needs

Metal	2014	2015	2016
Nickel, t	11,359	11,350	8,486
Copper, t	4,958	5,301	4,007
Palladium, koz	48	53	40
Platinum, koz	19	20	15

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# Key investment projects

#### TAIMYR PENINSULA (NORILSK NICKEL'S POLAR DIVISION)



#### **HIGHLIGHTS**

#### Stage 2

- Design ore processing capacity of 10,2 mtpa
- Increased nickel content in nickel concentrates from 8.6% to 13.5%
- Reduced smelting costs due to a 12% decrease in sulphide mass in the concentrate received (starting from 2016)
- Increased sulphur disposal to tailings by 16%
- 2016 CAPEX of ca. RUB 10 bn (USD 148 mln)
- Outstanding CAPEX of ca. RUB 4 bn (USD 69 mln)
- IRR (Stages 1-2) > 40%

#### Project overview

The main phase of a major Talnakh Concentrator reconstruction project was launched in April 2014. Stage 1 was commissioned in January 2015. Talnakh Concentrator's Stage 2 involved expansion of the main building, reconstruction of the reagent preparation building, and construction of several new facilities. In fact, Stage 2 was equivalent to constructing a new concentrator capable of processing all ores from the Talnakhskoye Field.

#### **Environmental effect**

Sulphur emissions per tonne of produced non-ferrous metals were reduced due to a 12% decrease in sulphide content in the concentrate.

#### **PROJECT STATUS**

**Stage 2:** Phase 1 of the new tailings pit fully commissioned in September 2016; processing equipment installation completed in October 2016.

#### Project schedule



Launch and commissioning of Stage 1



Launch of processing capacity at Stage 2



Commissioning of Talnakh Concentrator's new tailings pit



Full commissioning of Stage 2

Q1 2015 (completed)

October 2016 (completed)

Q4 2016 (completed)

Q1-Q2 2017



#### **HIGHLIGHTS**

- Gradual increase in the annual ore output to 0.95 mln t by 2018 and 2.4 mln t by 2024
- Ore reserves of 58 mln t
- 2016 CAPEX of ca. RUB 10 bn (USD 153 mln)
- Outstanding CAPEX for 2017–2024 of ca. RUB 80 bn
- IRR > 30%

#### Project overview

The project is aimed at boosting the existing annual ore output by stripping rich cuprous ore reserves of the Talnakhskoye and Oktyabrskoye Fields and preparing them for extraction.

#### **PROJECT STATUS**

Commissioned in 2016: Stage 1 and Stage 4 of the production facility with an annual capacity of 300 kt of rich ore.

Sinking in 2016: 420 metres of ventilation shaft-10 (1.8 out of 2.1 km completed) and 455 metres of skip-cage shaft-1 (1.3 out of 2.1 km completed); drifting of over 2.3 km.

Average metal content



2.7%



3.1%



8.0 g/t

**Project schedule** 





Capacity commissioning (300 kt)



Production ramp-up (to 1.75 mln t)



Completion of ventilation shaft-10 construction



Completion of skip-cage shaft-1 construction



Production ramp-up (to 2.4 mln t)

2015 (completed)

Capacity commissioning (500 kt)

2016 (completed)

2017

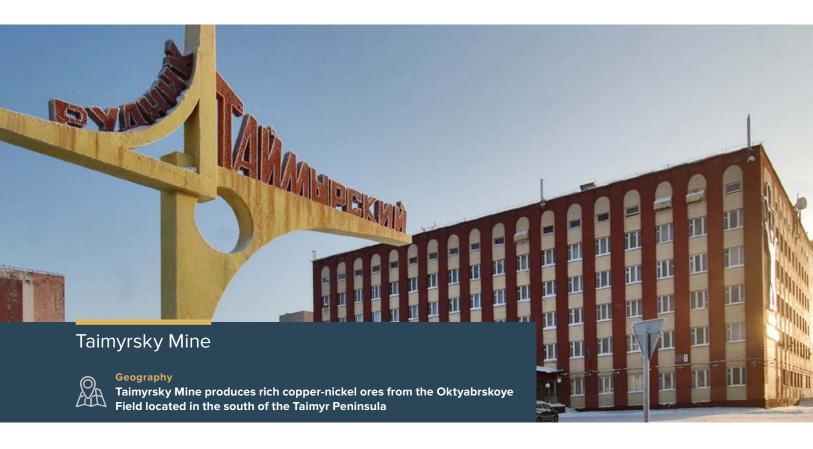
2018

2019

2024

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#### **HIGHLIGHTS**

- Ore reserves of 63.0 mln t
- 2016 CAPEX of ca. RUB 4 bn (USD 68 mln)
- Outstanding CAPEX for 2017–2022 of over RUB 30 bn
- IRR > 60%

#### Project overview

The project is aimed at increasing rich ore production from  $3.5\,\mathrm{mln}\,t$  to  $3.9\,\mathrm{mln}\,t$  by 2020 through improved performance.

#### **PROJECT STATUS**

Over 5.9 km of underground workings completed and 0.2 mtpa of new capacity commissioned in 2016.

Average metal content



2.3%



3.5%



**7.3** g,

Project schedule



Capacity commissioning (300 kt)



Capacity commissioning (100 kt of rich ore)



Capacity commissioning (800 kt of rich ore)



Capacity commissioning (200 kt of rich ore)



2016 (completed)

Q3 2017

Q4 2018

Q4 2019

Production ramp-up (to 3.9 mln t)

2020



### **HIGHLIGHTS**

- Ore reserves of 59 mln t
- 2016 CAPEX of ca. RUB 4 bn (USD 59 mln)
- Outstanding CAPEX for 2017–2022 of ca. RUB 11 bn
- IRR > 75%

### **Project overview**

The project is aimed at maintaining the current annual production level at 5.2 mln t until 2023.

### **PROJECT STATUS**

In 2016, 6 km of underground workings were completed and Stage 4 commissioned to maintain cuprous ore output at 3.0 mtpa.

Average metal content



1.0%

Capacity commissioning (250 kt of disseminated ore)



3.1%



7.6 g/t

Project schedule



Capacity commissioning (100 kt of rich ore)

Q1 2019



Capacity commissioning (50 kt of rich ore and 700 kt of cuprous and disseminated ore)

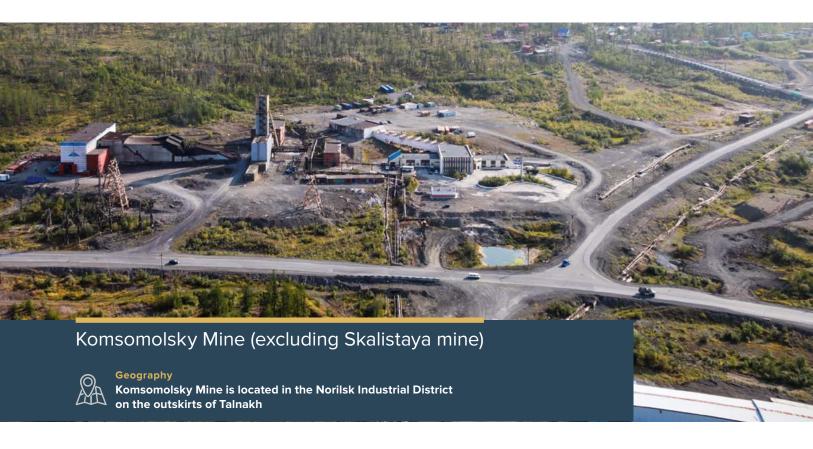


Capacity commissioning (300 kt of cuprous and disseminated ore)

Q2 2020

2020-2025

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### **HIGHLIGHTS**

- Ore reserves of 24.9 mln t
- 2016 CAPEX of ca. RUB 3 bn (USD 40 mln)
- Outstanding CAPEX for 2017–2020 of over RUB 16 bn
- IRR > 43%

### **Project overview**

The project is aimed at maintaining the current annual production level at  $3.8-4.1\,\mathrm{mln}$  t until 2020.

### **PROJECT STATUS**

In 2016, ca. 3 km of underground workings were completed and 100 ktpa of new capacity commissioned.

Average metal content



1.5%



1.8%



5.5 g/t

Project schedule



Capacity commissioning (100 kt of rich ore)



Completion of the western backfilling shaft Capacity commissioning (800 kt)



Capacity commissioning (200 kt of rich ore)



Capacity commissioning (100 kt of rich ore)



Capacity commissioning (200 kt of rich ore)

2016 (completed)

2017

2018

2019

2020



### **Project overview**

All operations at Nickel Plant were shut down on 1 September 2016, with pyrometallurgical capacity at Nadezhda Metallurgical Plant expanded to process all nickel feedstock of Polar Division. Refining operations are being moved to Kola MMC and Norilsk Nickel Harjavalta.

### **Environmental effect**

Upgrade of Talnakh Concentrator and shutdown of Nickel Plant are expected to reduce sulphide emissions by 15% and significantly decrease ground-level concentrations of pollutants in adverse weather conditions.

### **PROJECT STATUS**

### **Nadezhda Metallurgical Plant**

March 2016: smelting operations launched to process all of the Polar Division's nickel concentrate by ramping up pyrometallurgical capacity to 2.4 mtpa of ore; 2016 CAPEX of ca. RUB 1.3 bn; outstanding CAPEX for 2017 of ca. RUB 0.8 bn.

Q1 2016: existing capacity upgraded to process 150 ktpa of nickel slag from Copper Plant; CAPEX of RUB 0.1 bn.

July 2016: all nickel feedstock transferred from Norilsk Concentrator; CAPEX of RUB 0.7 bn.

### **Copper Plant**

Project launched to transfer sodium bisulfate production from Nickel Plant's sintering shop; CAPEX of RUB 0.7 bn.

Project schedule



Shutdown of Nickel Plant's sintering and smelting shops



Shutdown of all operations at Nickel Plant



Design documents for mothballing and decommissioning of the plant's production facilities

August 2016 (completed)

/ Business Overview / Key investment projects



### **HIGHLIGHTS**

- Sulphur output of up to 600 ktpa
- Sulphur dioxide recovery rate of at least 95%
- 2016 CAPEX of RUB 0.6 bn.

### **PROJECT STATUS**

- SNC Lavalin began to develop engineering documents
- Estimation of power supply infrastructure costs in progress
- Engineering surveys for the Engineering Documents stage completed
- Preparation of the construction site in progress.

### **Project overview**

The project aims to design and introduce new solutions and technology to extract elemental sulphur from waste gases of Nadezhda Metallurgical Plant's flash smelters, and reduce sulphur dioxide emissions down to the level prescribed by regulations.

### **Environmental effect**

This project will have the strongest impact on improving environmental performance among other upgrade projects of the Company. Its goal is to reduce sulphur dioxide emissions with the most effective technology.

### Project schedule



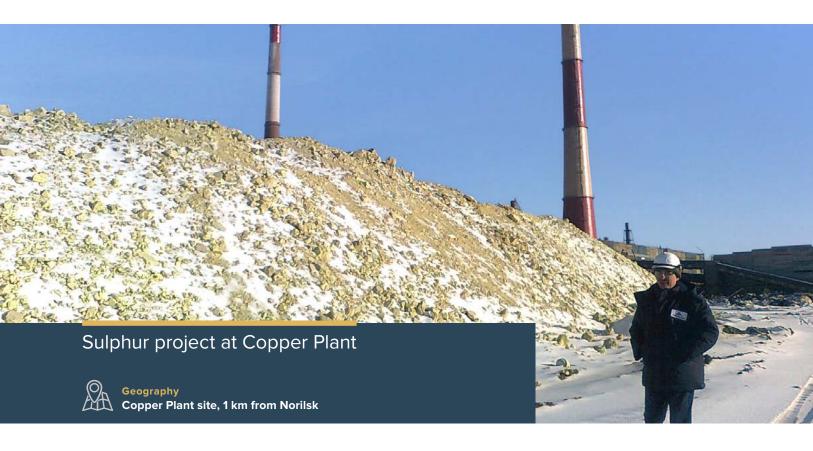
Sulphur project design documents; approval of design documents and results of engineering surveys and inspections by Russia's State Expert Review Board

2

Engaging SNC Lavalin (Canada) to develop engineering documents

Q4 2016 (completed)

2015 (completed)



### **HIGHLIGHTS**

- Sulphur output of up to 280 ktpa
- Sulphur dioxide recovery rate of at least 90%
- 2016 CAPEX of ca. RUB 13 mln
- Estimated completion in 2021

### **Project overview**

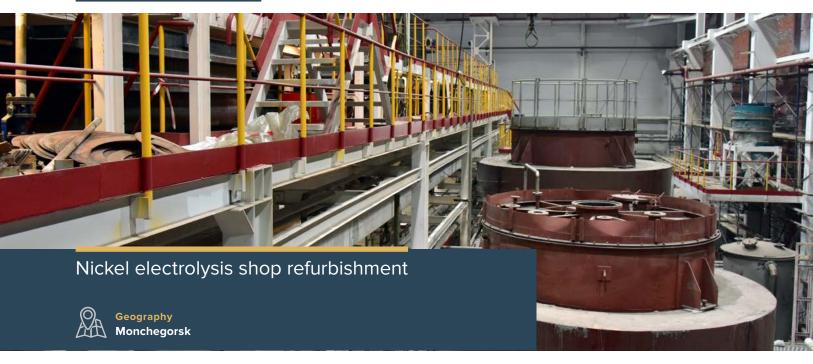
The project aims to design and introduce new solutions and technology to extract elemental sulphur from waste gases of Copper Plant's Vanyukov furnaces, and reduce sulphur dioxide emissions down to the maximum permitted level. The project is an alternative solution to high sulphur dioxide emissions and provides for sulphur production refurbishment at Copper Plant with technology developed by Gipronickel Institute with an option to use some of the existing buildings, structures, machinery and infrastructure.

### **PROJECT STATUS**

Feasibility study and preparation of design specifications in progress; completion expected in Q1 2017.

/ Business Overview / Key investment projects

### KOLA PENINSULA (KOLA MMC)



### **HIGHLIGHTS**

### **NES-1** highlights

- Nickel output of up to 45 ktpa
- CAPEX of ca. RUB 0.8 bn
- Project completed in 2016

### **NES-2** highlights

- Nickel output of up to 145 ktpa
- 2016 CAPEX of ca. RUB 1 bn;
- Outstanding CAPEX of ca. RUB 18 bn
- Project completion in Q4 2018

### Project overview

Nickel electrolysis shop-1 saw refurbishment of buildings, structures, processing machinery, auxiliary equipment, engineering networks and ventilation. The purpose of refurbishment was to prepare the shop for production capacity reconfiguration following the shutdown of Nickel Plant. Re-launch of the shop will maintain stable commercial output while the main electrolysis shop (nickel electrolysis shop-2) of Kola MMC is being upgraded.

Nickel electrolysis shop-2 is to be transformed into an advanced, cost-efficient cathode nickel facility by introducing the technology of nickel electrowinning from chlorine dissolved tube furnace nickel powder. The metal will have maximum purity.



### **HIGHLIGHTS**

- Annual disposal of 350 thousand cubic meters of saline effluents and manufacturing of commercial or internal use products
- 2016 CAPEX of RUB 0.4 bn
- Project CAPEX of RUB 1.5 bn

### **Project overview**

The project provided for the construction of a liquid waste evaporation unit for electrolytic nickel production. It offset the adverse effect of nickel production facilities on water bodies adjacent to the Company's production site in Monchegorsk by significantly decreasing sodium sulphate, sodium chloride and boron content in wastewater discharged from the nickel electrolysis shop through production of commercial sodium sulphate, sodium chloride, boric acid and thermal power.

/ Business Overview / Key investment projects

### TRANS-BAIKAL TERRITORY (BYSTRINSKOYE MINING COMPANY)



### **HIGHLIGHTS**

- Output of 10 mtpa
- Ore reserves of 294 mln t
- 2016 CAPEX of over RUB 18 bn (USD 269 mln)
- Outstanding CAPEX for 2017 (excluding power infrastructure costs) of ca. RUB 36 bn (ca. USD 500 mln)
- New jobs for 3 thousand employees
- IRR > 40%

### **Project overview**

The project aims to construct an open-pit mine and a mining and processing plant in order to utilise untapped reserves.

Average metal content



0.7%



23%



0.8 g/t

Annual average output at design capacity in 2020–2030



67 kt



**2.9** mln t of magnetite concentrate (66% Fe)



252 koz in concentrate



### **PROJECT STATUS**

Temporary operations on Naryn-1 (Borzya) – Gazimursky Zavod railway.

Construction of 220 kV Kharanorskaya GRES – Bugdainskaya – Bystrinskaya power line with 220 kV Bystrinskaya substation in progress; when completed, facilities will be purchased by FGC UES.

Turnkey construction of a concentrator, camp, power infrastructure and a boiler in progress; stripping and preparatory operations at the Verkhneildikansky and Bystrinsky-2 open-pit mines underway.

Delivery and installation of core processing equipment in progress; contracts concluded to supply mining and stripping machinery.

Interior finishing and engineering network installation in the main and auxiliary Bystrinsky MPP buildings as soon as they are connected to heating systems.

Bystrinsky Field resource model updated to include gold and mixed ores; reserves expected to increase following additional exploration.

In 2016, the Company and Sberbank CIB signed a USD 800 mln 8-year project financing facility agreement to finance the Chita project.

In July 2016, China's Highland Fund acquired a 10.67% stake in the Chita project.

The Board of Directors approved the sale of a 39.32% stake in the Chita project to CIS Natural Resources Fund. The Company will retain more than 50% in the project and its operator status.

Project schedule



2017

Construction and launch of Naryn-1 (Borzya) – Gazimursky Zavod railway



Commissioning of a 220 kV power line. Mining and processing plant pilot launch



Plant to reach design capacity

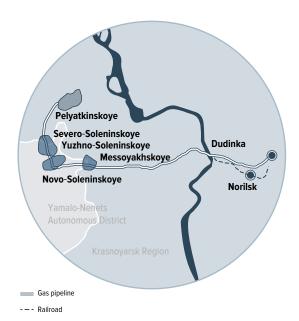
2020

/ Business Overview /

### Gas and energy assets

### GAS ASSETS

The Company's gas assets operate as a stand-alone business unit focusing on sustainable development of the entire Norilsk Industrial District. The Company views them as strategic assets, but does not include them into the core value chain.



### Natural gas and gas condensate reserves as at 31 December 2016

Field	Residual hydrocarbon reserves within licence blocks (categories A+B+C <sub>1</sub> )			
Field	Free gas, bcm	Recoverable condensate, mln t		
Norilskgazprom				
Messoyakhskoye Gas Field	6.86	-		
Yuzhno-Soleninskoye Gas Condensate Field	52.95	0.5		
Severo-Soleninskoye Gas Condensate Field	44.74	0.5		
Taimyrgaz				
Pelyatkinskoye Gas Condensate Field	187.77	6.9		
Total residual reserves	292.32	7.9		

### Taimyrgaz/Taimyrtransgaz

The company operates the Pelyatkinskoye Gas Condensate Field.

In March 2016, Taimyrtransgaz was spun off from Taimyrgaz as part of the reorganisation process, splitting the regulated activities into gas transportation and gas production.

During the same year, the company completed the construction and pilot-testing of an appraisal well in the northeastern flank of the Pelyatkinskoye Field.

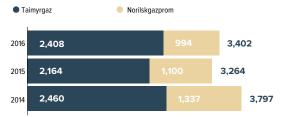
### Norilskgazprom/Norilsktransgaz

The company operates the Messoyakhskoye, Yuzhno-Soleninskoye and Severo-Soleninskoye Gas Condensate Fields and also transports natural gas and condensate to consumers in the Norilsk Industrial District.

In November 2016, Norilsktransgaz was spun off from Norilskgazprom as part of the reorganisation process, splitting the regulated activities into gas transportation and gas production.

Actual volumes of gas deliveries in 2016 stood at 930.361 mcm (102.74% of the target). The company produced 997.106 mcm of gas (99.72% of the target), with the above-target gas volumes delivered via savings through internal needs and losses.







### **ENERGY ASSETS**

### NTEK (Norilsk-Taimyr Energy Company)

NTEK engages in power and heat generation, transmission and sale using the facilities of Norilskenergo (MMC Norilsk Nickel's branch) and Taimyrenergo. The energy sources include renewables (hydropower) and gaseous hydrocarbons (natural gas).

To generate power from renewable energy sources, NTEK operates Ust-Khantayskaya and Kureyskaya HPPs (441 MW and 600 MW of installed capacity, respectively).

In 2016, the share of renewable energy stood at 25% for the Norilsk Nickel Group and 38% for the Norilsk Industrial District.

In the reporting period, the low water level at the HPP water storage reservoirs led to increased TPP generation and lower HPP volumes in order to achieve long-time average annual levels to coincide with the peak load of the heating season. In 2016, TPP generation reached 5,259,908 thousand kWh, while the HPPs produced 2,929,888 thousand kWh.

### **Bystrinsk Electric Grid Company**

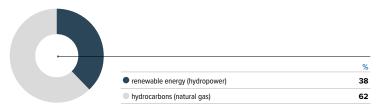
Bystrinsk Electric Grid Company was set up as a construction management company to carry out an investment project.

In 2016, it completed the following works:

- adjusted technical data and estimates in the design
- received an approval following the review of the fibre optic communication line and 220 kV overhead line design documents;
- drafted 95% of the engineering documents;
- completed the construction of the 220 kV overhead line, except for land rehabilitation and corrections;
- completed main installation works at the 220 kV Bystrinskaya substation. In 2017, the facilities are scheduled to be commissioned following the completion of all the works.

In 2017, the facilities are scheduled to be commissioned following the completion of all the works.

### NTEK's power generation in 2016



Source: Company data

### **USE OF RENEWABLE ENERGY**



- replacement of obsolete hydroelectric units to make better use of water resources, increase overall HPP generation volumes, and improve the reliability of energy supplies to the Norilsk Industrial District. Two out of seven hydroelectric units have been replaced, while 2017 sees the replacement of hydroelectric unit – 3 underway;
- Opornaya substation investment project covers installation of an additional autotransformer to increase the intake of power and capacity from the Ust-Khantayskaya and Kureyskaya HPPs for the Norilsk Industrial District across the 110 kV network to 350 MW and 500 MW in normal and emergency conditions, respectively (the project was completed in 2016).

/ Business Overview /

### Transportation and logistics

### The Company's transportation and logistics assets



#### Own sea fleet

° 6 ice-class vessels



#### Own river fleet

- o 555 vessels
  - 163 self-propelled vessels
  - 392 towed vessels



### Own rail car and locomotive fleet

- o 118 container flatcars
- 1 switch locomotive
- o 1 Yermak electric locomotive
- 12M62 diesel locomotive



### Operated aircraft fleet

- o 31 aircraft
  - 16 helicopters (operated by Norilsk Avia)
  - 15 planes (operated by NordStar Airlines, former Moscow Branch of Taimyr Air Company)

The Company's transportation and logistics assets also include Norilsk Airport and port terminals in Murmansk, Dudinka, Krasnoyarsk and Lesosibirsk.

Norilsk Nickel has a unique Arctic cargo fleet comprising five Norilsk Nickel container vessels and one Yenisey heavy-duty ice-class tanker (ARC 7 under the PMPC classification). The vessels are able to break through 1.5 m thick Arctic ice without icebreaker support.

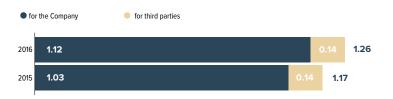
The Company's dry cargo fleet does not only ensure year-round service between Dudinka, Murmansk, Arkhangelsk, Rotterdam and Hamburg sea ports, but also offers commercial voyages to other destinations. In 2016, 69 voyages were made from Dudinka (vs 63 voyages in 2015), including 11 direct voyages to European ports.

The Yenisey tanker ensures export deliveries of gas condensate from the Pelyatkinskoye Gas Condensate Field to European ports and operates commercial voyages to other destinations.

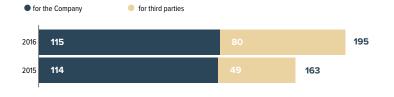
In 2016, the waterway cargo traffic at the Dudinka port (Polar Transportation Branch) totalled 3.9 mln t (vs 3.7 mln t in 2015), including 1.2 mln t along the Northern Sea Route and over 2.7 mln t along the Yenisey River.

The waterway cargo traffic at the Company's transfer terminal in Murmansk (Murmansk Transportation Branch) was 926.3 kt (vs 777.8 kt in 2015), with 139 vessels handled (vs 127 vessels in 2015), including 91 vessels on coastal voyages (vs 80 vessels in 2015) and 48 vessels on export and import voyages (vs 47 vessels in 2015). The Company's own rail car and locomotive fleet carried 456.7 kt of cargo (vs 337.7 kt in 2015). In the reporting period, the terminal handled 12.8 thousand rail cars (vs 9.8 thousand in 2015) and 10.9 thousand road cars (vs 7.4 thousand in 2015).





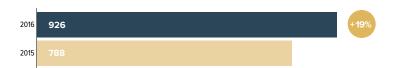
### Shipmentsby the Yenisey tanker, kt



### Waterway cargo traffic at Dudinka port, $mln\ t$



### Waterway cargo traffic at Murmansk terminal, kt



In 2016, the Company sold its stake in Arkhangelsk Commercial Sea Port (the Company controlled 74.78% of the shares). The sale came as a step towards implementation of the Company's strategy to gradually dispose of its non-core assets.

Nornickel also sought to bring down the transshipment costs by moving some of its cargo flows to the new cargo transfer terminal in Murmansk

In 2016, a new stage of the Norilsk Airport reconstruction programme was launched. As was ordered by the President of the Russian Federation, the 2010-2020 Russian Transport Development Federal Programme provides for the reconstruction of the Norilsk Airport and associated infrastructure maintenance works. The key objective is to reconstruct the airport's runway and apron. The project is implemented under the 2014–2018 publicprivate partnership agreements between MMC Norilsk Nickel and the Federal Air Transport Agency. The reconstruction funding has already been approved, with RUB 9 bn to be sourced from the federal budget and RUB 3 bn to be contributed by MMC Norilsk Nickel.

In 2016, the first stage of reconstruction of the 720 m long runway was completed, which helped maintain the established passenger traffic for Boeing 737 and similar aircraft across the existing route network from 3 June 2016 (start of the construction works) to 15 September 2016 (commissioning of the entire runway).

To keep Norilsk's air traffic going in the summer seasons of 2017 and 2018, the airport will also serve light aircraft. In addition, 2017 will see the launch of another project, reconstruction of the Norilsk Airport's apron.



Norilsk Avia responds to industrial and social needs of the Norilsk Industrial District and the Dolgano-Nenets Municipal District of the Taimyr Peninsula. The company provides air transportation related to:

- operations of Norilsk Nickel's production facilities;
- emergency air medical services and search-and-rescue operations;
- local passenger traffic



NordStar Airlines is a rapidly developing aviation project launched on 17 December 2008, when the Board of Directors of Taimyr Air Company (a wholly-owned subsidiary of MMC Norilsk Nickel) resolved to establish Moscow Branch of Taimyr Air Company along with the NordStar Airlines brand. The company's fleet comprises 15 aircraft, including nine Boeings 737-800, one Boeing 737-300 and five ATRs 42-500. With a passenger traffic in excess of 1 mln people per year, NordStar Airlines annually confirms the status of a major air carrier not only for the Siberian Federal District, but also nationwide. The air company's current route network covers over 30 cities in Russia and the CIS. Each year, NordStar operates seasonal charter flights from Moscow, St Petersburg and other cities.



In April 2016, the Company sold its 100% stake in Nordavia. Nordavia continues to operate flights, including in Murmansk and Arkhangelsk Regions.



Traffic volume of own rail car and locomotive fleet increasing

35%

/ Business Overview /

### Products and sales

Nornickel operates its own global sales network covering all major markets: Russia, Europe, Asia Pacific, and the USA.

Sales, along with production, have traditionally been a key value adding line of Nornickel's business. In 2016, the Company started implementing its updated sales strategy with a committed focus on enhanced positioning in end consumer markets to ensure long-term efficiency of sales. The strategy relies on added value as one of the core performance indicators to measure sales efficiency.

In 2016, the Company's nickel sales in the market were represented by full-plate and cut cathodes of marketable quality. Those are supplied to customers that use primary nickel to produce stainless and other special steels, alloys, perform electroplating, produce catalysts, cathodes for current sources, and other materials for a wide range of industries, including food and chemicals manufacturing, energy, aerospace and automotive sectors, construction, etc.

### The Company fully covers the demand for nickel in Russia.

As the world's largest producer of high grade nickel also makes its products available in the key sales markets worldwide, including Asia, Europe, and Americas. In 2016, in line with the sales strategy, the Company was also diversifying its nickel sales by industry, gaining greater presence in alloy, electroplating, and battery manufacturing sectors.

Due to the scheduled shutdown of Nickel Plant in Norilsk and the subsequent reconfiguration of the production facilities, primary nickel production in 2016 was concentrated at Kola MMC and Norilsk Nickel Harjavalta.

As the world's largest producer of palladium, the Company continues to implement the strategy of entering into direct contracts with end consumers to ensure sustainable growth of the industrial use of platinum group metals and demand for them. This is achieved through long-term contracts with major customers.

Palladium and platinum are produced in two main forms: bars (20% of total output) and powders (80% of total output). Bars are predominantly used in medicine (dental equipment), electronics (conductors and radio equipment components), and jewellery manufacturing. For powders, the key consumers are autocatalyst producers and the chemical industry.





Source: Company data

### A significant share of sales based on longterm prepaid supply arrangements.

Higher sales premiums and improved liquidity are secured through Norilsk Nickel's products being registered on the world's major exchanges. After copper produced by MMC Norilsk Nickel's Polar Division was registered on the London Metal Exchange in December 2015, the Company launched supplies of its NORILSK-branded copper.

In 2016, sales were made against the backdrop of a tough market environment, a significant surplus of physical nickel supply and a slowdown in global commodity and financial markets. However, the Company managed to outperform its global peers in terms of average selling prices. This proved the effectiveness of Norilsk Nickel's sales network, which enabled the Company to maintain its presence in all key sales markets, along with securing profitable sales.

Most of the Company's products were sold to end consumers, direct access to whom is at the core of Norilsk Nickel's sales strategy.

Throughout 2016, Norilsk Nickel continued to maintain the reputation of a highly reliable supplier, seeing customer confidence as its top priority.

Its customer satisfaction index with regard to the quality of products and services also remained high.

Precious metals were refined from raw materials produced by Polar Division and Kola MMC at Krasnoyarsk Gulidov Non-Ferrous Metals Plant under a tolling agreement.

### **PRODUCTS AND SALES**



### Norilsk Nikel Harjavalta Finland

- Nickel cathodes
- Nickel briquettes
- ° Electrolytic nickel powder
- O Nickel and cobalt sulphate
- ° Nickel hydroxide and nickel hydroxycarbonate



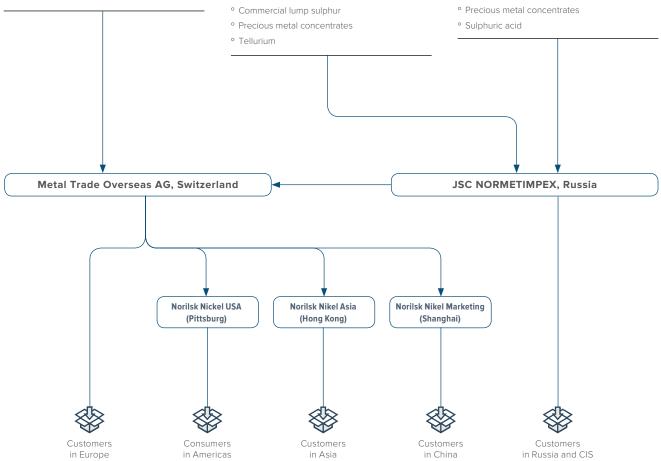
### Polar Division Russia

- Nickel cathodes<sup>1</sup>
- Copper cathodes
- Cobalt ingots<sup>1</sup>
- Cobalt oxide<sup>1</sup>
- Technical selenium



### Kola MMC Russia

- Nickel cathodes
- Copper cathodes
- Cobalt cathodes
- O Cobalt concentrate
- ° Nickel carbonyl (powder and pellets)



<sup>&</sup>lt;sup>1</sup> Produced until August 2016 at Nickel Plant

/ Business Overview /

### **Procurement**

All materials and equipment procurement activities are based on the regulated purchase procedures and policies and are in full compliance with Federal Law No. 223-FZ On Procurement of Goods, Work and Services By Certain Types of Legal Entities dated 18 July 2011.

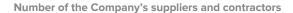
In 2016, the Company signed approximately five thousand contracts for centralised procurement of materials and equipment, which totalled around USD 1.6 bn and covered about 99% of its materials and equipment needs. During the reporting period, around 40% of materials and equipment were purchased based on category procurement policies.

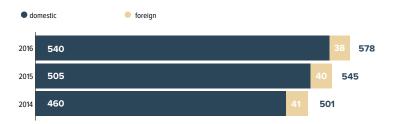
Given the key role of domestic suppliers, the Company pays great attention to fostering ties with reliable Russian businesses. International suppliers are mainly engaged for delivering unique equipment or systems that do not currently have Russian alternatives.

As at the end of 2016, domestic suppliers outnumbered foreign ones by 14 to 1, and their total amount in the procurement system increased by 7% against the previous year, while foreign suppliers saw a minor decline in numbers.

The Company's Tender Committee and tender commissions, which handle larger purchases, carried out procurement procedures for a total of over USD 750 mln. They also oversaw tender procedures of the Company's branches and subsidiaries in Russia to purchase services for over USD 200 mln.

The Company's Tender Committee focuses on improving the procedures for identifying reliable suppliers of quality products at a fair market value. In 2016, the Company secured the purchase of the required equipment and materials with a total price decrease of 5%, which is lower than the industry indices and the data by the Federal State Statistics Service of Russia. The year saw continued efforts aimed at expanding and improving the participant pool of procurement procedures. The procedures are now more open and transparent, among other things thanks to trading at open e-commerce platforms such as Fabrikant and B2B-Center. As a result, over 65% of new contracts were signed directly with producers or with their trading companies.





### PROCUREMENT PROCESS IMPROVEMENT

The unified methodology centre led the ongoing efforts focused on developing and implementing guidelines on procurement processes. The Company also worked on harmonising the regulatory procurement framework across its Russian subsidiaries and branches, including services procurement.

The Company pilot-tested a SAP SRM/SLC—based automated system for supplier relationship management, which helped improve the transparency and competitiveness of the procurement procedures.

### MATERIALS AND EQUIPMENT INVENTORY MANAGEMENT

In 2016, the Company's inventory management remained focused on stock cuts and improvements in the stock structure and turnover. As a result, inventory volumes decreased by 5% to USD 1,120 mln on the back of better requirements planning by internal customers and material and technical procurement units at production sites, improved inventory monitoring and controls, and the introduction of standardised inventory levels by category.

### ANTI-CORRUPTION POLICY

As part of its anti-corruption initiatives, the Company has formulated a standard anti-corruption clause to be included in contracts with counterparties. In addition, in 2016 the Company continued to work on improving counterparty due diligence procedures. Before signing a contract, the Corporate Security Unit evaluates the business reputation, reliability and solvency of potential counterparties.

### Research and development

The main focus of Nornickel's R&D function was the Company's large-scale Processing Capacities Reconfiguration Programme. In the reporting year, it carried out several research and technological development projects, along with a number of feasibility studies.

The Company's operating efficiency programme for 2015–2017 aims to find unique solutions to streamline the mining planning process, increase overall recovery rates for nickel, copper, cobalt and PGM, re-process secondary resources (tailings, copper slags, and nickel bearing pyrrhotite with a low nickel content), and optimise the work-in-progress inventory levels.

Other programmes include upgrade of nickel and cobalt production technologies at Kola MMC, improvement of product quality and optimisation of production costs.

In 2016, Nornickel acquired three patented technologies developed by employees of the Company and Gipronickel Institute.

As part of its environmental protection programme, the Company is going to upgrade the equipment at its smelting facilities in order to reduce sulphur dioxide emissions

### **KEY R&D AREAS IN 2016**



### Company Development Strategy

- feasibility study to choose the optimal design for the Company's copper refining facilities
- development of alternative methods for processing copper electrorefining sludge at Kola MMC



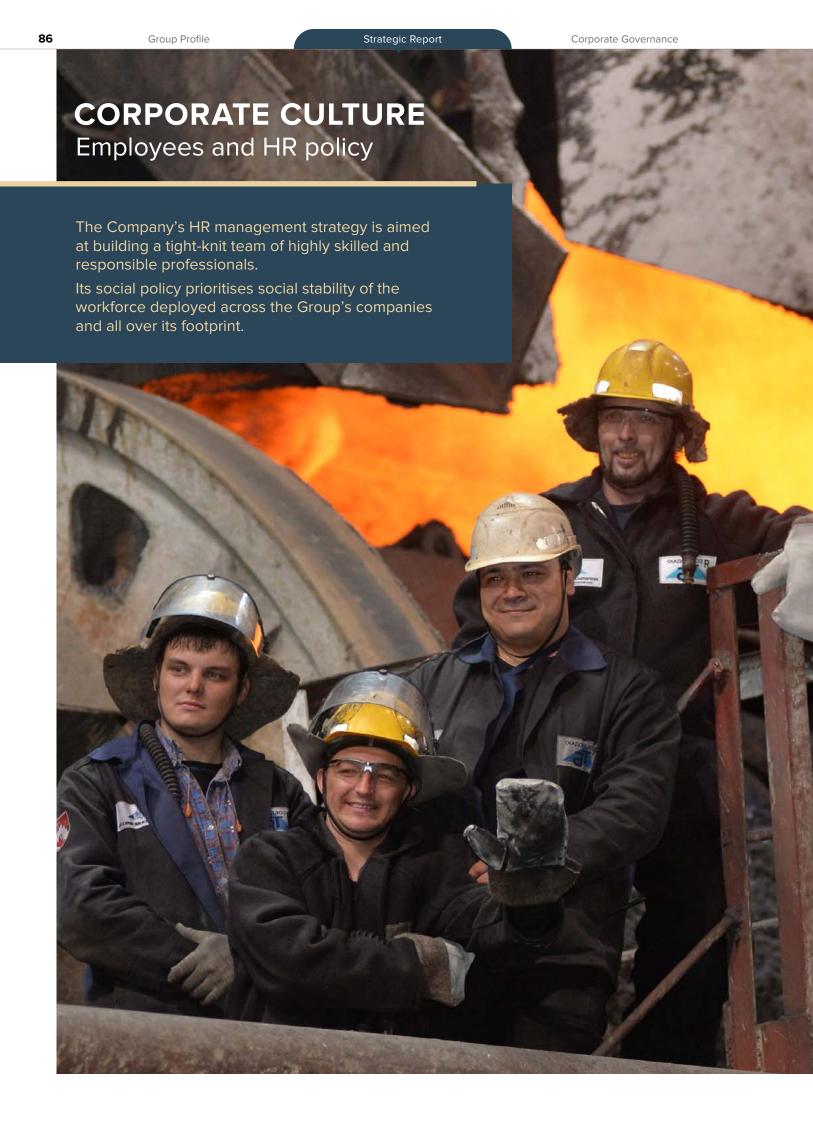
### **Production**

- feasibility study on mining balance reserves of all ore types at Polar Division's mines
- development of operating procedures for processing ores at the Company's concentrators
- development of operating procedures for efficient processing of nickel bearing pyrrhotite with a low nickel content at Nadezhda Metallurgical Plant, and processing of Cu-Ni-Fe alloys at Copper Plant
- feasibility study on the efficiency as regards processing of the magnetic fraction of precious metal concentrates produced at Kola MMC



### **Environmental protection**

- development of a technology to neutralise commercial sulphuric acid with natural limestone, and feasibility study to compare it with the elemental sulphur production technology used at Nadezhda Metallurgical Plant
- feasibility study to choose an acceptable option for setting up a third field of Lebyazhye tailings pit



The Company uses a segmentation approach to HR management, taking into account employee involvement in the end-product output and difficulties associated with skill replacement/ acquisition. HR segmentation and a segment-specific targeted approach to HR management enable the Company to focus its resources on the employees who create added value for the business.

This helps boost the prestige of key jobs in the labour market and streamline staffing processes. HR segmentation and a targeted approach to remuneration and benefits increase the transparency and appeal of the value proposition (a set of tangible and intangible benefits the Company offers to its employees) for the staff and their families.

### The Norilsk Nickel Group's average headcount

Region/country of operation	2014	2015	2016
Russia	79,897	81,637	81,081
USA	10	10	10
Europe	290	307	311
Asia	12	12	13
Australia	15	6	5
South Africa	883	870	586
Botswana	748	780	_
Indonesia	-	2	_
Total	81,855	83,624	82,006

### STAFF COMPOSITION

In 2016, the Norilsk Nickel Group's average headcount totalled 81,100 employees in Russia and 1,000 employees abroad. Most of the Russia-based employees (70% of the Russian headcount) work in Norilsk and the Taimyrsky Dolgano-Nenetsky Municipal District. Another 16% of the Group's Russian headcount work on the Kola Peninsula.

### The headcount reduction in 2016 was due to the Nickel Plant shutdown and disposal of certain assets.

In 2016, the Company continued rolling out the SAP HCM-based automated HR management system: on 1 January 2016, it was implemented in Bystrinskoye Mining Company, and on 1 April 2016 – in Polar Division. In February 2016, the Head Office saw the launch of a business travel automation project (SAP FI-TV) rolled out to Kola MMC and Pechengastroy on 1 July 2016. In the reporting year, Polar Division also introduced self-service kiosks and SMS notifications for employees.

### Gender profile for the Russian operations



Source: Company data

### Headcount breakdown for the Russian operations



/ Corporate Culture / Employees and HR policy

### **EMPLOYMENT FOR THE NICKEL PLANT STAFF**

To retain the unique skills of Nickel Plant after its shutdown, the Company took steps to provide redundant employees with new jobs in the Company's Polar Division and other Russian subsidiaries.

In accordance with the labour and employment laws, the Company informed the local employment agency, its social partners, the trade union of MMC Norilsk Nickel and its subsidiaries, Social and Labour Council, and the elected body of Nickel Plant's primary trade union organisation of launching the redundancy procedures at Nickel Plant.

By the end of 2016, the Company had finished informing the employees that had not yet selected a new job, on the expected openings in Polar Division and the Company's subsidiaries in the Norilsk Industrial District, and signed addenda to employment contracts to provide new positions within the Company's Polar Division and other operations. As at 31 December 2016, 1,680 employment contracts were signed, and all employees were redeployed.

The Company signed agreements with 569 employees as part of the Metallurgy Veterans Programme; as at 31 December 2016, all participants received a one-off redundancy payment.

To allocate jobs for the redeployed Nickel Plant employees, the Company signed a total of 160 agreements with the staff of Copper Plant and Nadezhda Metallurgical Plant, enabling them to participate in the Complementary Corporate Pension Plan in case of employment termination in 2016. As at 31 December 2016, one-off termination payments were made to all participants (107 employees received payments under the Complementary Corporate Pension Plan, and 53 employees received severance payments).

For the redundant workers of Nickel Plant classified as "vulnerable", the Company offered additional benefits and termination guarantees. As at 31 December 2016, 41 respective employees signed redundancy agreements with the Company, terminated their employments and received all due payments.

The Company also offered additional social guarantees to Nickel Plant female employees who were not reemployed. As at 31 December 2016, it signed redundancy agreements with 24 such employees, providing for additional social guarantees. All of them terminated their employment contracts and received due payments.

From the beginning of 2016, 644 Nickel Plant employees completed professional training to gain new vocational qualifications, with another 69 in process. On top of that, 514 employees underwent training to upgrade their qualification category and get permits for specific types of work.

As at 31 December 2016

1,680 employment contracts

were signed, and all employees were redeployed





# 644 employees

completed professional training to gain new vocational qualifications

While implementing these initiatives, the Company was continuously engaged in internal and external communications (meetings of working groups with the management and employees of Polar Division's metallurgical units, staff and face-to-face meetings, interviews, TV and media communications, distribution of information materials, etc.).



#### Recruitment

The Company applies a wide range of advanced sourcing technologies. In particular, we use a specialised website called Norilsk Nickel – Jobs and Careers at <a href="https://www.hr.nornik.ru">www.hr.nornik.ru</a> and a free employment hot line 8 800 700 1943 (\*).

The Company also implements corporate programmes to attract workers and specialists from among young people that are completing training in their professional schools. The Company has ongoing relations with colleges and universities and offers internships to students majoring in much sought-after professions and qualifications.

In 2015, the Company reconfigured its classical field internship programme by focusing on the educational component of the development for its future employees to become new industry leaders. Norilsk Nickel was the first company in the Russian mining industry to apply the method of interaction with students and graduates based on their participation in solving real business tasks. The method served as a basis for the Conquerors of the North business game held as part of the Professional Start programme that took place in Norilsk in summer 2015.

In 2016, the programme brought together 360 people, with 215 of them taking part in the business game. For two summer months, the programme participants were offered to take a hands-on training and a multi-stage business game with a focus on team work to try and tackle some of the Company' real tasks. The participants were assisted by 20 mentors from among the Company's employees.

In 2016, Kola MMC joined the Conquerors of the North business game.

In 2016, the Company won the Graduate Award 2016 for the best student engagement programme in Russia.

The Company also attracts employees from other regions as part of the programme called Assistance to New Employees in Adapting to the New Place of Residence in Norilsk and the Taimyrsky Dolgano-Nenetsky Municipal District. To do that, we are recruiting young talents and qualified workers from across Russia to fill positions on the skills shortage list.

In 2016, there were 1,943 people participating in the programme. As part of it, the Company helps to provide comfortable living conditions for the visiting employees and reimburses the relocation and resettlement costs.

### / Corporate Culture / Employees and HR policy

As a way to identify and recruit the best candidates to fill open vacancies and reduce staff turnover, in 2016 the Company started using the latest methods of employee evaluation and capacity assessment. Those help measure intellectual abilities and risk appetite of each individual, which are important in recruiting candidates to positions with a high level of exposure to occupational hazards. They are also helpful in obtaining information about each employee's motivating and demotivating factors. The project was first piloted at Bystrinskoye Mining Company, where 100% of new employees were recruited following successful assessment results.

#### Personnel development

MMC Norilsk Nickel's business is based on respect for each employee and their rights. The Company's position on human rights is reflected in the Code of Business Ethics, Personal Data Policy, and Anti-Embezzlement Regulation.

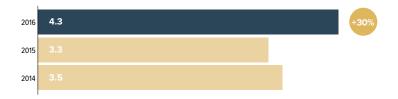
In 2016, the Company started implementing a talent pool management framework for lower and middle line managers. Approaches to building the talent pool were cascaded to operations of Polar Division, Kola MMC, and Pechengastroy. More than 800 talent pool candidates went through the assessment and selection stages. A total of 112 candidates with strong potential capacities were included into the talent pool for managerial positions. Each employee in the talent pool is supervised by their manager, who is assigned to share knowledge and experience and help develop managerial skills and professional competencies, while also acting as a mentor.

The Company launched a project to automate talent pool management using SAP HCM.

In 2016, we implemented a programme called Management Start to provide training in managerial skills for recently appointed managers at production units. The programme covered 93 people in the Norilsk Industrial District and 45 people in Kola MMC. Ten best performing programme participants were offered internships at the Company's European facilities.

We carried out a large-scale programme to provide retraining to more than 70 thousand employees of the Group, including more than 19 thousand people aged below 30. Over 43 thousand employees were trained in corporate training centres.

### Financing of the Assistance programme, USD mln



In 2016, we continued our efforts to develop managerial skills in managers from the Top 500 and Top 1,000 categories. More than 350 managers and other employees were covered by training in communication skills.

The reporting year saw the launch of a project to assess professional competencies of managers in the Power and Mechanics functional units.

The project aims to gauge and help develop professional qualifications in employees who fill managerial positions. The assessment is based on functional models of competencies and job profiles. Managers of different levels within the two units underwent dedicated tests to identify priority areas for professional growth. In 2017, efforts to develop models and tools for professional competencies assessment will continue.

In 2017, the key focus will be made on re-building the corporate training framework and enhancing the operational performance of corporate training centres. The Company plans to create and roll out training programmes for Top 100 managers. An area of special attention will be the introduction of modern technologies to assist in the training of various personnel categories. With our reconfigured production cycle, modernised operations, and new technologies, forms and approaches to activities in a rapidly changing operational environment, we need to make sure our employees meet new requirements to professional knowledge, skills, and competencies. The corporate training framework must provide employees with a quick and easy access to new knowledge, helping them master new professional skills and receive training and development support for horizontal and vertical job rotation.

### Social partnership

Russian operations of Norilsk Nickel have established a social partnership framework aimed at reconciling interests of employees and employers on matters pertaining to the regulation of social and labour relations. The Company meets all obligations under the Labour Code of the Russian Federation, collective bargaining agreements and joint resolutions.

In regulating labour relations, employee interests are represented by social and labour councils and trade union organisations.

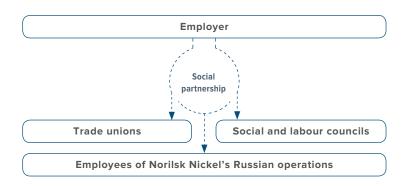
Our companies in the Norilsk Municipal District, Taymyrsky Dolgano-Nenetsky Municipal District and Murmansk Region have social and labour councils representing 92% of employees. Norilsk Nickel's Corporate Social and Labour Council has been in place since 2006, covering over 52 thousand employees at facilities based in Norilsk and the Taimyrsky Dolgano-Nenetsky Municipal District.

### As at the end of 2016, 11.5% of employees engaged in Norilsk Nickel's Russian operations were members of trade union organisations.

Trade union organisations of Nornickel and its subsidiaries, Kola MMC and its subsidiaries, NordStar Airlines and Zapolyarye Health Resort are all members of the Trade Union of MMC Norilsk Nickel Employees, an interregional trade union organisation. In the reporting year, the relationship between the employer and the Trade Union was governed by the Social Partnership Agreement signed in 2014 to formalise implementation procedures for joint initiatives ensuring sustainable performance, operating and financial excellence, employee welfare, health and safety, and enhancement of social benefits.

As part of the social partnership framework implemented at Norilsk Nickel's Russian facilities, the following bodies have been established: collective bargaining commissions, labour dispute commissions, social benefits commissions/ committees, social insurance commissions, health and safety commissions/committees, social and labour relations committees, etc.

### SOCIAL PARTNERSHIP FRAMEWORK



### Membership in trade unions

Company	Employees enrolled in trade unions, %
Group's operations in the Norilsk Industrial District	8
Gipronickel Institute	8
Krasnoyarsk Shipyard	13
NordStar Airlines	16
Kola MMC and subsidiaries	17
Zapolyarye Health Resort	33
Lesosibirsk Port	46
Krasnoyarsk River Port	53
Yenisey River Shipping Company	59

In 2016, a number of Norilsk Nickel's Russian operations entered into new collective bargaining agreements and extended the expired ones. Collective bargaining commissions amended the relevant agreements in the reporting year. The need to make those amendments was mostly related to adjustments in wage rates arising from legislative changes, organisational structure transformation and introduction of a new automated HR system. In general, Norilsk Nickel's Russian operations comply with the applicable laws and substantially meet employee expectations.

/ Corporate Culture / Employees and HR policy

### REMUNERATION

2016 saw the Company's compensation policy approved. It is aimed at:

- employee recruitment and retention;
- promotion of productive attitude to work;
- administrative efficiency and simplicity;
- compliance with legal requirements.

Key principles of Norilsk Nickel's compensation policy include the following:

- progressive remuneration system in line with the job grading framework (single approach to salaries and wages);
- incentivisation to achieve targets by improving individual, business unit and Group performance;
- salary competitiveness in the current labour market environment;
- promotion of the Company's image as a responsible and reliable employer.

In addition, the Company's employees are provided with benefits. The largest portion of benefits is represented by reimbursements of vacation travel expenses (round trip travel expenses and baggage fees) for employees living in the Far North and their families. Since 2012, the Company has been providing such compensations on an annual basis (previously, it reimbursed travel expenses once every two years). Benefits also include discounted tours for health resort treatment and vacations for employees and their families.

In 2016, the Company spent over USD 103 mln on benefits for employees of its Russian operations, or USD 1,300 per employee (on average).

### **Efficiency improvement initiatives**

In 2016, around 2,000 people (including employees of the Company's Head Office, branches and Russian subsidiaries) took part in the KPI-based assessment.

In 2016, the Company spent over

USD 103 mln

on benefits for employees of its Russian operations Efforts to roll out the employee performance management framework across Nornickel companies will continue into 2017. The KPI-based assessment will be extended to include managers up to section heads at key production facilities. Particular emphasis will be placed on communications to ensure that managers view the framework as an efficient management tool resting on competent leadership and successful mentoring of subordinates coupled with ongoing feedback.

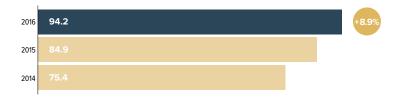
Average monthly salary across the Group's Russian operations

Currency	2014	2015	2016
USD	1,963	1,392	1,404
thousand RUB¹	75.4	84.9	94.2

<sup>&</sup>lt;sup>1</sup> based on the following annual average USD/RUB exchange rates: 67.0349 in 2016; 60.9579 in 2015; 38.4217 in 2014.

The salary includes a fixed and a bonus components (70% and 30%, respectively).

Average monthly salary across the Group's Russian operations, thousand RUB



Number of awards granted for outstanding production achievements, long-term track record and diligent work



### SOCIAL PROGRAMMES FOR EMPLOYEES

### Health improvement programmes for employees

The harsh climate of the Far North and the heavy working conditions of the mining and smelting facilities require that the Company make an extra effort to protect its employees' health. Hence, health improvement and health resort treatment programmes for employees and their families are a key priority of the Company's social policy.

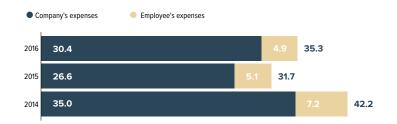
In 2016, over 10,000 employees and their families received recreational treatment in Zapolyarye Health Resort (Sochi) owned by the Company. Around 13,000 people spent their vacations in other health resorts, including over 5,000 people travelling to Bulgarian resorts.

Health resort treatment available to employees' children includes programmes for chronic disease prevention and summer vacation programmes. As part of this initiative, over 1,500 children spent their holidays in Anapa and Varna (Bulgaria).

**Health improvement and** health resort treatment programmes for employees and their families are a key priority of the Company's social policy.



Financing of health resort treatment and vacation programmes for employees and their families, USD mln1



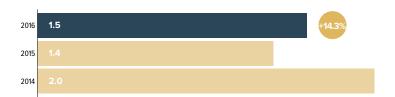
#### **Sports programmes**

Sports programmes serve to promote a healthy lifestyle, foster corporate solidarity, and develop corporate culture. The Company pays special attention to corporate competitions, including in futsal, volleyball, basketball, alpine skiing, snowboarding and swimming.

The Company's employees are especially enthusiastic about the Dad, Mum and I – a Sporty Family corporate competition and the Polar Olympics held since 2015.

Events for local communities include annual Spartakiads. In Norilsk, the Spartakiad is held across 14 sports and is attended by about 4,000 people. One of Nornickel's social policy highlights is the support of amateur sports. In 2016, the number of participants in the Company's corporate sports events exceeded 20,000 people.

Nornickel's sports events are attended not only by its employees, but also by local communities. Financing of sports programmes, USD mln



In 2016, the number of participants in the Company's corporate sports events exceeded

>2(

thousand people



Nornickel // Annual report 2016



### **Housing programmes**



These programmes aim to provide the Company's employees with housing in Russia's mild climate regions. The Company purchases ready-for-living apartments in various Russian regions, and provides them to eligible employees under co-financing agreements. In 2014–2016, apartment locations included the Moscow and Tver Regions and the Krasnodar Territory.

Our Home programme has been in place since 2010 and is intended for employees of Polar Division, Polar Transportation Branch and Kola MMC. My Home programme was launched in 2011 and covers 13 facilities operating in Norilsk, the Taimyrsky Dolgano-Nenetsky Municipal District and Murmansk Region. Since the roll-out of the programme, 2,841 apartments have been provided to the Company's employees. In total, the Company has purchased 3,404 ready-for-living apartments, including 560 ones in 2016.

Under the programme, the Company pays up to half the cost of the apartment (up to USD 30,000), with the rest paid by the employee within a certain period of employment with Norilsk Nickel (from five to ten years). The cost of housing remains unchanged for the entire period of the employee's participation in the programme. Ownership rights are registered at the end of the programme, but the employee may move in immediately after receiving the apartment.

The Company's commitment to purchase up to 550 apartments for its employees annually was included in the collective bargaining agreement for 2012–2015.

The Company's commitment to purchase up to



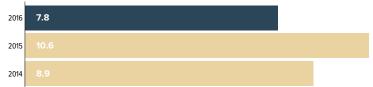
In 2016, the Company launched a new housing programme aimed at social support and employee retention, the Temporary Assistance Programme for Employees of Polar Division and Kola MMC in Acquiring Residential Property. The programme is now being piloted at Polar Division and Kola MMC. It is designed to provide the Company's employees with a greater choice indetermining their future region of residence and quality of housing, and encourage them to make responsible decisions. To this end, the Company provides employees with interest-free loans to make a down payment due in up to ten years and partially repay mortgage loan interest. In 2016, there were 122 people participating in the programme.

Participating in the programme in 2016

## **122** people

# 2016 Pension Plans • Financing, thousand USD • Participants, people 7,816 Co-Funded Pension Plan Complementary Corporate Pension Plan 6,727 Complementary Corporate Pension Plan





### **Pension plans**

Norilsk Nickel offers its employees nongovernmental pension plans.

Under the Co-Funded Pension Plan, the Company and the Company's employee make equal contributions to the plan.

The Complementary Corporate Pension Plan provides incentives for pre-retirement employees with considerable job achievements and a steady employment record.



/ Corporate Culture /

### Health and safety

### MANAGEMENT APPROACHES TO HEALTH AND SAFETY ISSUES

Norilsk Nickel's Health and Safety Policy gives precedence to the life and health of employees over operational performance, while also demonstrating the management's commitment to creating a safe and healthy environment and fostering sustainable employee motivation for safe workplace behaviour.

Norilsk Nickel has an HSE Committee chaired by the First Vice President – Chief Operating Officer. The Committee's health and safety objectives include:

- improving the effectiveness of efforts aimed at ensuring health and safety at the Company and its subsidiaries in Russia;
- increasing the responsibility of executives and other employees of Norilsk Nickel and its Russian subsidiaries for ensuring operational health and safety:
- assessing the effectiveness of health and safety initiatives at the Company and its subsidiaries in Russia;
- refining the health and safety management framework at Norilsk Nickel and its Russian subsidiaries.

In 2016, the Committee was engaged in considering improvements to the existing health and safety management system, as well as monitoring the implementation of the planned activities aimed at reducing injury rates and enhancing the system's effectiveness. The Committee held health and safety video conferences and on-site meetings at production sites of the Company's branches and Russian subsidiaries.

### CORPORATE STANDARDS

In accordance with the regulated procedure, Norilsk Nickel's branches and subsidiaries in Russia have organised the implementation of corporate health and safety standards.

The HSE Department monitors the implementation of the standards across the Company's branches and Russian subsidiaries.

With a view to implementing the standard on the assessment and management of risks (STO KISM 121-211-2014) in an effective and comprehensive manner, the Risk Control project has been launched. As part of the project, Norilsk Nickel's managers, specialists and blue collar workers completed dedicated training courses. The Company developed guidelines and recommendations on hazard identification and risk assessment and management.

### THE COMPANY'S HEALTH AND SAFETY OBJECTIVES INCLUDE

- creating a safe and healthy environment through introducing advanced technologies and scientific achievements to the production processes;
- fostering sustainable employee motivation for safe workplace behaviour and training employees in anticipation and prevention of workplace incidents.

In 2016, Corporate Standard STO KISM 121-219-2016. Requirements for Arranging Demarcation of Hazardous Areas and Visualisation of the Working Space was developed and put into effect.

Following the certification of 484 conveyors at Polar Division, fencing and drive and tension stations were repaired, including the installation of blocking devices, replacement of wiring and painting of equipment (in 2016, 220 conveyors were repaired).

In the reporting year, second-party health and safety management system audits were carried out across production units of the Company's branches and Russian subsidiaries (46 audits in total). To improve audit quality, 58 additional workshops and training sessions were held for 222 auditors.

Transport and personnel positioning systems and radiocommunications systems were introduced at all underground mines of the Group. The distance learning systems were equipped with mobile recorders and event data recorders.

The Company's branches and Russian subsidiaries have health and safety monitoring systems in place with the following prevention and control functions:

- safety behaviour audits;
- multi-stage health and safety control;
- ad hoc health and safety inspections;
- on-the-spot health and safety inspections;
- comprehensive health and safety inspections.

### PERSONNEL TRAINING AND DEVELOPMENT RELATED TO HEALTH AND SAFETY

In 2016, competencies of line managers (about 5,000 people) with respect to the introduction and monitoring of safe practices were assessed across production units of the Company's branches and Russian subsidiaries.

During the same year, 94 heads of the Company's branches and Russian subsidiaries participated in a training session on the practice for managers and their subordinates to provide mutual feedback using the elements of safety behaviour audits.

In 2016, Norilsknickelremont set up a training class for employee workshops on power supply insulation. Dedicated training sessions are offered for managers and specialists of mining facilities, as well as onboarding and adaptation courses for new employees and employees with a track record of up to three years.

### EXTERNAL HEALTH AND SAFETY AUDIT

From October to December 2016, DuPont Science and Technologies assessed the current situation and determined priorities for further improvement of the health and safety management framework and for mitigating injury and accident risks at Norilsk Nickel's key companies (Polar Division, Kola MMC, Norilsknickelremont, and Polar Construction Company). According to DuPont's reports, in November 2016 the industrial safety culture level (Bradley Curve indicator) amounted to 2.5 (compared to 1.4 in March 2014, 2.1 in March 2015, and 2.3 in December 2015). The safety culture improvement is driven by the implementation of risk mitigation standards, safety communication campaign and dedicated risk mitigation programmes.

To improve audit quality, 58 additional workshops and training sessions were held for

**222** auditors

Five training bases at Polar Division and Kola MMC are used as a platform for training in working at heights and gaining relevant practical skills (simulators, special equipment and devices)



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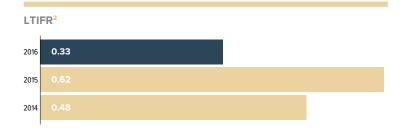
/ Corporate Culture / Health and safety

### HEALTH AND SAFETY PERFORMANCE INDICATORS

The Group's Health and Safety Strategy approved by the Audit Committee of the Board of Directors in 2014 lays out plans to reduce production-related accidents (in absolute terms) by 20% every year (starting from 2017, by 15%).

Bringing fatal production-related accidents down to zero is one of the strategic objectives to be reached in the course of implementing the Health and Safety Strategy.



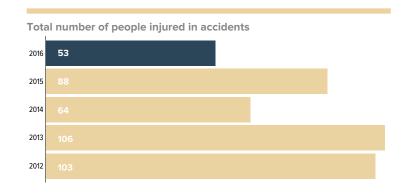


### Health and safety indicators

Indicators	2014	2015	2016
Total number of production-related accidents in accordance with the labour laws of the Russian Federation	64	88	53
Fatal production-related accidents	8	14	13
Production-related accidents resulting in lost time injuries	56	74	40
Small injuries	305	411	719



Further information on health and safety initiatives is available in the Company's Corporate Social Responsibility Report for 2016.



FIFR stands for Fatal Injury Frequency Rate (FIFR = FIs / total number of hours worked \* 1,000,000).
 LTIFR stands for Lost Time Injury Frequency Rate (LTIFR = non-fatal LTIs / total number of hours worked \* 1,000,000).

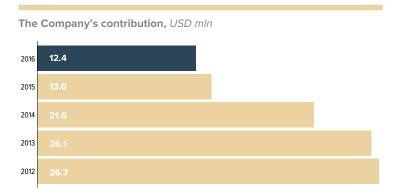
### Social investments

The Company makes a significant contribution to the development of local communities by implementing a range of social programmes that address current and future objectives. Norilsk Nickel's key regions of operations in Russia include the Krasnoyarsk Territory, the Kola Peninsula, and the Trans-Baikal Territory.

### RESETTLEMENT PROGRAMME

In 2016, the Company together with state authorities continued implementing a joint long-term target programme to relocate people living in Norilsk and Dudinka (Krasnoyarsk Territory) to the Russian regions with favourable climate conditions. This tenyear programme has been in place since 2011 and provides for relocation from Norilsk and Dudinka of 11,265 families (1,126 families per year) registered in the respective municipalities as those entitled to resettlement under Federal Law No. 125-FZ On the Housing Subsidies for Citizens Migrating from the Far North Regions and Equated Territories dated 25 October 2002.

The Company acts as a programme sponsor, with its total donations amounting to USD 8.3 bn. Since the launch of the programme, the Company has contributed USD 140.6 mln (RUB 5.3 bn) to the Krasnoyarsk Territory budget, including USD 12.4 mln (RUB 830 mln) in 2016. In 2011–2016, some 5,786 families (as of January 2017) purchased apartments and moved to the mainland, including 4,796 families from Norilsk and 990 families from Dudinka.



In 2016, the Krasnoyarsk Territory's Ministry of Construction, Housing and Utilities issued a total of 648 home purchase certificates under the applicable housing quota.

### Resettlement results, 2011-2016

	2011	2012	2013	2014	2015	2016	Total
The Company's contribution, USD mln	40.2	26.7	26.1	21.6	13.6	12.4	140.6
Total apartments purchased	1,137	1,013	1,102	1,038	718	778	5,786
including Norilsk	957	850	881	862	569	677	4,796
including Dudinka	180	163	221	176	149	101	990

The ten-year programme in place since 2011 provides for relocation from Norilsk and Dudinka of

The Company acts as a programme sponsor

/ Corporate Culture / Social investments

### SUPPORT OF INDIGENOUS PEOPLES

The Company recognises the right of indigenous peoples to preserve their traditional way of life and factors in their need for decent living conditions. In 2016, the Company did not commit any violations affecting the rights of indigenous minorities.

The Company contributes to the preservation of traditions and culture of indigenous minorities of the North by helping to stage professional festivals of tundra inhabitants. In 2016, the Company provided around USD 75,000 for these purposes.

In the same year, to preserve and popularise local traditions, the Company organised a large-scale ethnocultural city-wide festival in Norilsk, Big Argish, primarily with the aim of promoting and developing the region's tourist potential. Those engaged in festival preparations were Dudinka cultural institutions and family national associations of indigenous peoples of Taimyr. The Company spent USD 299,000 to stage the event.

### SOCIAL INFRASTRUCTURE DEVELOPMENT

The Company is actively involved in the development and renovation of social infrastructure all across its footprint, looking to create accessible and comfortable environments for working and living.

In 2016, Norilsk Nickel continued building a fibre optic communication line between Novy Urengoy and Norilsk (the construction started in late 2014) with a view to providing people with a stable internet connection. The line will be over 900 km long, with 200 km running through permafrost and 4.5 km beneath the Yenisey River.

Under the Russian Transport Development Federal Programme, in 2014–2018 Norilsk Nickel and the Federal Air Transport Agency are to reconstruct the civilian part of the Norilsk Airport. The Company's financing of the project will total approximately USD 50 mln, with around USD 12 mln already spent in 2014–2016.

Since 2013, the Company has assisted in the development of the Tver Region under the agreement with the local government and Zavidovo Development. Results of 2016 include overhaul of a school and revamping of the adjacent territory, and construction of a bus station in the village of Zavidovo (Konakovo District, Tver Region) with convenient access roads.

On 3 October 2016, a tripartite memorandum of cooperation was signed in Norilsk between the heads of the Norilsk Municipality, Norilsk Nickel's Polar Division and the Vladimir Potanin Foundation with a view to establishing the Norilsk Development Agency. The Agency's key objectives include launching projects for economic diversification and urban space transformation, creating a favourable investment climate in the city, providing support for small and medium-sized businesses, and promoting local employment and self-employment. In addition, there are plans to develop the tourism cluster based on local natural and production facilities, hold training sessions and promote branded businesses and entrepreneurial initiatives.

The Company's costs to finance ethnocultural city-wide festival Big Argish The Company's costs to stage professional festivals of tundra inhabitants



USD 75 thousand



The Company continues building a fibre optic communication line going to Norilsk of the total length of

900<sub>km</sub>

The Company's costs to reconstruct the civilian part of the Norilsk Airport





### CHARITY

### **World of New Opportunities programme**

The Company has launched World of New Opportunities charity programme to encourage and promote sustainable development of local communities. In order to achieve this goal, the Company focused on the following objectives: development of soft skills of local communities' representatives, demonstration and introduction of new social technologies, support and promotion of public initiatives, encouragement of intersectoral partnership.

The programme is comprised of three key areas – Partnership, Innovations, Development



### **Partnership**

Partnership focuses onsupporting volunteer initiatives of active representatives from local communities, imparting new skills to the programme participants and developing local expertise.

In the spring of 2016, the Company promoted Social Technologies Forum – a city event to bring together representatives of local communities, government authorities and commercial organisations to discuss technologies and procedures of addressing social issues of the local communities, impart trends and best practices in charity and volunteer initiatives, demonstrate successful resolution of social issues. 2,265 citizens and 28 experts in developing civil society in Russia participated in social forums in Norilsk and Monchegorsk.



### **PARTNERSHIP / KEY INITIATIVES**

- Academy for social partnership and development (a series of workshops on social project development, expertise, assessment of projects/programmes and monetisation of social projects.
- Socially Responsible Initiatives Competition
- Social technologies forum
- Social engineering workshop
- City, It's Us! and PicNick events

/ Corporate Culture / Social investments

The Company aims to impart new skills and competencies to the participants contributing to the development of the local expertise. For the second year running, the Company stages three-day "social engineering" workshops for social activists, which combine theory and practice encompassing stages from idea generation to its implementation. In three days, 104 workshop participants from Norilsk, Dudinka, Monchegorsk and Zapolyarny developed and staged nine city events reaching out to over 1,500 local residents.

On the Company Day in 2016, Nornickel staged its first PicNick event, a festival "for a good cause" organised by local activists, participants of World of New Opportunities programme (winners of the Socially Responsible Initiatives Competition, socially responsible businessmen and FabLab employees) and Plant of Goodness corporate volunteer programme. It was a street festival with a projects fair, workshops, training, etc.

All events organised by the Company boosted charity culture in local communities, encouraged public-private partner projects. In 2016, Socially Responsible Initiatives Competition, which aims to support public initiatives, received 385 project bids, 95 of which were approved for funding. Grant funding totalled USD 1.4 mln.



### Innovations

Innovations facilitate the implementation of advanced technologies, foster R&D potential and encourage innovation in engineering. This area focuses on schoolchildren, university students and adult activists interested in science and frontier technologies.

Grant funding totalled



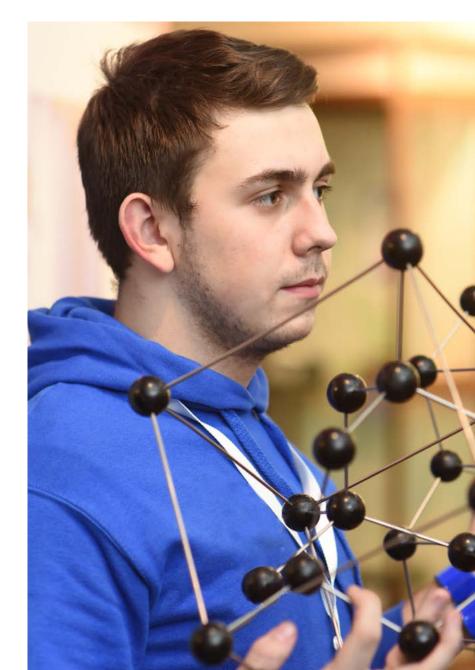
385 95

project bids of which were approved for funding

### **INNOVATIONS / KEY INITIATIVES**

- Arctic.PRO career guidance R&D marathon
- School of modern urban competencies
- FabLab R&D creativity laboratory
- Arctic Wave festival of R&D discoveries

In the autumn of 2016, Norilsk, Dudinka and Zapolyarny saw Arctic Wave R&D festivals aimed to promote R&D among the youth, support creative engineering and innovative thinking among schoolchildren, and demonstrate latest scientific achievements.



03

Over 20 interactive sites hosting science battles and intellectual team games, quests and contests, experiments and tests, lectures by young scientists and educational R&D shows. Over ten thousand people participated in the festival events.

For the third year running, the Arctic.PRO R&D marathon drew in over 1,000 schoolchildren aged 12 to 15.

For the second year running, the Company acts as the general partner of the All-Russian Festival of Science held by Lomonosov Moscow State University. In the autumn of 2016, Krasnoyarsk hosted Discovery City science festival with over 400 educational and interactive sites. Over 70,000 residents participated in three-month festival activities.



#### Development

Development engages active citizens and SMEs to address social issues of the local communities with the benefit of business processes.

The Company staged a course in social entrepreneurship, its participants develop business plans and showcase them at the Investment Session. Experienced trainers (active businessmen) assist participants with classes and homework.

In 2016, 19 social business projects were delivered at the Investment Session, out of which nine projects were approved for funding in the form of interest-free loans worth USD 0.4 mln. Over 60 jobs were created. Two clubs for socially responsible businessmen were open.

On 30 November, Norilsk hosted Franchising as a modern instrument of services and trade development conference and franchise fair. The event was organised by the Russian Franchise Association and sponsored by Nornickel. The participants discussed development potential of franchising and commercial real estate market, use of global experience in creating trading and hospitality infrastructure, logistic solutions. As part of the conference, the participants showcased franchises in the field of trade, services, catering, sports and beauty.



Business projects, delivered at the Investment Session:

social business projects

Over

60 jobs were created

/ Corporate Culture / Social investments

### SPONSORSHIP



### Rosa Khutor Ski Resort

In 2016–2019, Nornickel is going to invest in the development of Rosa Khutor ski resort USD 250.5 mln. This is done in order to preserve the heritage of Sochi Olympics as part of the with Popular Sports Support Programme in Russia. The funding is aimed at transforming the Olympic resort to a year-round tourist attraction, develop new ski trails and lifts, build recreational, sport and rehabilitation facilities. As a consideration, Nornickel was granted a minority stake in the Rosa Khutor project.



### **Russian Olympic Committee**

In May 2016, the Company signed a five-year partnership agreement with the Russian Olympic Committee, becoming the general partner of the Russian Olympic Committee and Olympic team. This enables the Company to support youth and high performance sports, including implementation of Olympic educational programmes of the Russian International Olympic University for a total amount of over RUB 1 bn.



### **International University Sports Federation**

In April 2016, the Company signed partnership agreement with the International University Sports Federation (FISU), under which the Company as an official partner of FISU will promote the development of international university sports movement.









#### CSKA professional basketball club

Nornickel continues to provide support to Russia's most successful and award-winning basketball club. In 2014, the team won 2016 EuroLeague Final Four over the strongest European basketball clubs.



#### Minifootball club Norilsk Nickel

In 2016, the team and administration personnel of Norilsk Nickel minifootball club were moved to Norilsk. Located in Norilsk, Norilsk Nickel minifootball club participates in Russian Super League Championship and Russian Futsal Cup. The club's movement gave a powerful push to minifootbal development in the local community. Russian Futsal Association together with MMC Norilsk Nickel rapidly and successfully develop All-Russia project Minifootbal at Polar Region schools. In the framework of the projects the club's football players hold workshops for schoolchildren, and special training sessions for trainers.

#### XXIX International Winter Universiade in Krasnoyarsk

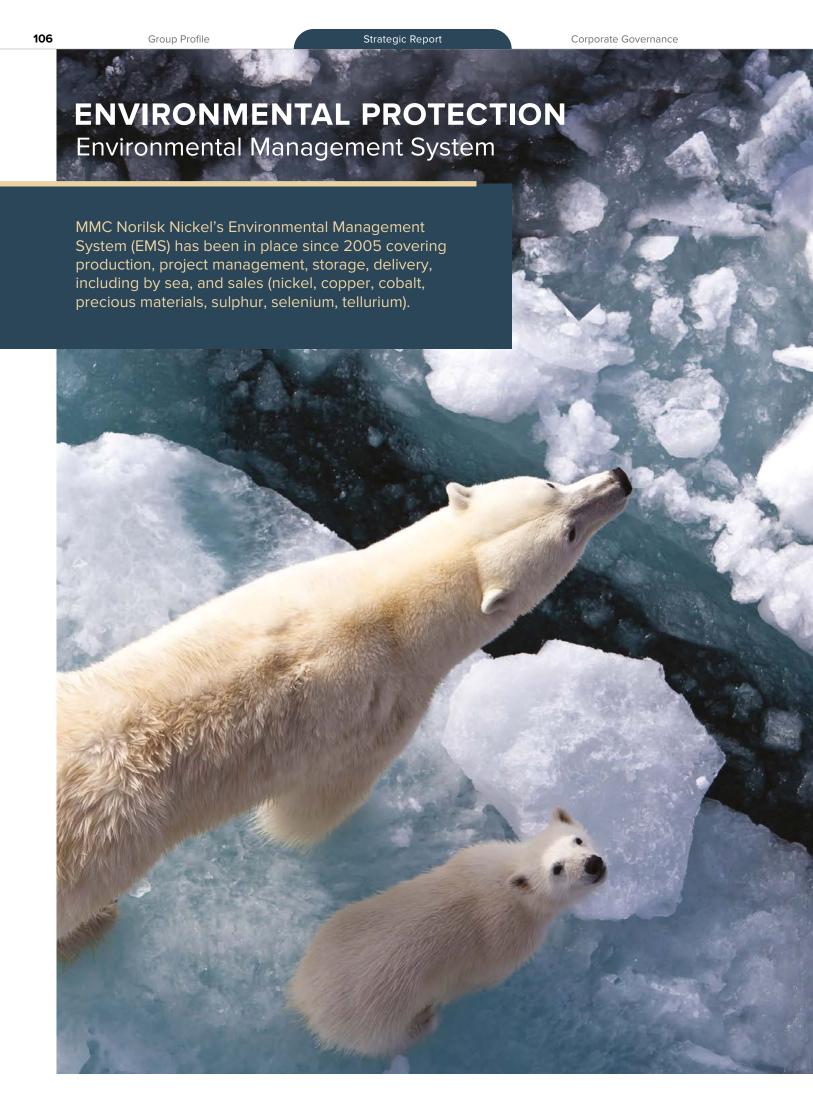
The Company, acting as the general partner of 2019 International Winter Universiade in Krasnoyarsk, successfully and promptly fulfils its obligations in line with the preparations for the upcoming international sports event. In 2016, the Company launched construction of a new athletic-training complex equipped with broadcasting system in Bobrovy Log Fun Park, expansion of skiing trails, development of integrated security system, and construction of a landing site for ambulance helicopter. During the upcoming Unversiade, 7 skiing trails will be used in Bobrovy Log Fun Park.

The Company's participation in the Winter Universiade will help create the most modern sporting infrastructure in compliance with global standards, designed for professional sportsmen training, to provide more comfortable and safer conditions for participants at the start point on the trail, broadcast the alpine competitions using the most up-to-date equipment.

The Company also trains skilled personnel and volunteers to hold the 2019 Winter Universiade. Funding, provided by Nornickel, will support training for the managers of sports facilities, heads of functional divisions and sports top-managers, as well as volunteering team-leaders in 2017–2019 in Russian International Olympic University and Siberian Federal University.

In order to promote the XXIX International Winter Universiade in Krasnoyarsk among various audience and to cover more regions, Nornickel assisted to brand three NordStar Airlnes planes for domestic and international flights with logos of the 2019 Winter Universiade.





Nornickel // Annual report 2016

In 2016, the EMS continued to operate as part of the Corporate Integrated Quality and Environmental Management System (CIMS). This enabled the Company to harmonise environmental and quality management initiatives with the operations of other functions (such as production management, finance, health and safety) and enhance its overall performance along with environmental safety.

Throughout 2016, the Company carried out internal audits as part of the CIMS. In line with international standards and Norilsk Nickel's by-laws, internal audits were conducted by specially trained and competent personnel:

- 19 EMS internal audits were held at the Company's Head Office (as part of the CIMS internal audits);
- 57 internal audits were held at Polar Division, Polar Transportation Branch and Murmansk Transportation Branch (21, 23 and 13 audits, respectively).

To confirm compliance of the EMS with ISO 14001, the Company engages Bureau Veritas Certification (BVC) to conduct surveillance audits once a year and recertification audits once every three years. In October 2016, an EMS surveillance audit was held as part of the CIMS at the Company's Head Office in Moscow, Polar Division's production sites in Norilsk, and Murmansk.

Transportation Branch in Murmansk. The audit confirmed that MMC Norilsk Nickel's EMS complied with ISO14001:2004 (Compliance Certificate No. RU228136 QE-U of 2 November 2014). Based on the audit findings, BVC identified the scope for potential improvements while also highlighting the overall strengths of the Company's EMS.

In 2016, Norilsk Nickel was working to bring the EMS in line with the requirements of ISO 14001:2015 replacing ISO 14001:2004.

Kola MMC's EMS has been in place since 2004 covering ore mining, production of converter matte, nickel, copper, cobalt, their compounds, precious metal concentrates and sulphuric acid.

Since 2009, Kola MMC's EMS has operated as part the CIMS, in compliance with ISO 14001 and the Company's by-laws.

In 2016, following another Kola MMC's CIMS audit, the EMS was recertified for compliance with the ISO 14001 requirements as confirmed by Certificate No. RU227729 E-U of 4 May 2016.

In 2016, 30 EMS internal audits were held at Kola MMC (within the scope of the CIMS internal audits).

# 19 EMS internal audits

were held at the Company's Head Office in 2016

# 57 internal audits

were held at Polar Division, Polar Transportation Branch and Murmansk Transportation Branch

# THE EMS STRENGTHENS THE NORILSK NICKEL GROUP HELPING IT TO:

- secure priority funding for environmental initiatives;
- raise environmental awareness among employees;
- improve its public image;
- gain a competitive edge in the domestic and international markets;
- demonstrate a global standard of environmental compliance to customers and other stakeholders, and win the trust of customers who require the supplier to have an effective EMS;
- gain additional opportunities for recognition in the international context and in global markets;
- boost its investment case.

/ Environmental protection /

# **Environmental impact**

The Company's environmental programme includes the upgrade of Talnakh Concentrator to increase sulphur disposal to tailings, shutdown of all operations at Nickel Plant and construction of recycling units to extract elemental sulphur (sulphuric acid) from waste gases at Nadezhda Metallurgical Plant and Copper Plant. Kola MMC has developed and is implementing a programme to reduce sulphur dioxide emissions by introducing the briquetting and briquette melting technology along with upgrading its melting equipment, including the reconstruction of feeding and sealing systems of ore-thermal furnaces and a set of measures to prepare low-grade ores for smelting. These steps will significantly reduce the negative impact of emissions from metallurgical operations at Polar Division and Kola MMC's Zapolyarny and Nikel sites.

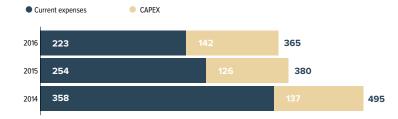
The reporting year saw the shutdown of Nickel Plant, the main source of pollution in the southern industrial area of the city of Norilsk operating within the city boundaries since 1942.

The Nickel Plant closure discontinued approximately 370 ktpa of air emissions and eliminated 600 stationary sources of air pollution, of which 458 had no purification facilities. The plant's two wastewater discharge points previously discharging approximately 37 kt of pollutants per annum were closed. Over one million tonnes of production waste is no longer generated, including coal processing products, metallurgical slag, ferrous cake and other wastes.

# KEY STEPS TO MITIGATE THE GROUP'S ENVIRONMENTAL IMPACT

- comply with the applicable laws and international agreements, ISO 14001, industry and corporate environmental regulations;
- gradually reduce pollutant emissions and discharges, and expand the scope and volume of waste recycling;
- ensure sustainable use of natural resources;
- implement the best available technology.





Environmental impact metrics across Norilsk Nickel's Russian operations<sup>1</sup>

Item	2014	2015	2016
Total air pollutant emissions, mln t	2.01	2.06	1.94
incl. sulphur dioxide, mln t	1.95	2.01	1.88
incl. solids, mln t	0.02	0.02	0.01
Wastewater disposal, mln cubic meters	62	54	52
Pollutant discharges, mln t	0.17	0.18	0.19
Use and treatment of waste at the Company's own facilities, mln t	18	19	20
Waste disposal, mln t	17	15	14

As part of upgrading the sulphur dioxide recycling units at Copper Plant and Nadezhda Metallurgical Plant, the project design documents were developed and approved by Russia's State Expert Review Board. The Company selected the EPC contractor and signed a contract for the work to be performed at the next stages of the sulphur project at Nadezhda Metallurgical Plant.

In 2016, total emissions of Norilsk Nockel's Russian operations amounted to 1.9 mln t, which is 6% lower than in 2015. The decrease was due to lower sulphur dioxide emissions (-7%) primarily resulting from the shutdown of Nickel Plant, as well as the briquetting technology introduction and lower production of pellets at Kola MMC.

<sup>&</sup>lt;sup>1</sup> Including Polar Division, Polar and Murmansk Transportation Branches, and Kola MMC.





In 2016, further steps were taken to reduce air emissions with a view to gradually achieving maximum permissible emission rates. The Company also continued its efforts to improve control over emissions during unfavorable weather conditions. In the reporting period, a total of 76 emission control cases were registered at Norilsk Nickel's metallurgical operations. To inform the local community of the environmental impact of its metallurgical operations on the quality of air in Norilsk, the Company continued running an automatic toll-free enquiry service line offering environmental forecasts for the city area to anyone dialing 007 or 420 007.

The discharge of wastewater pollutants in 2016 dropped by

The decrease in total wastewater discharge by 2% was mainly due to the shutdown of Nickel Plant and lower discharge of mining waters at Kola MMC. Also, the discharge of wastewater pollutants in 2016 dropped by 18% and did not exceed the maximum permissible discharge rates.

In 2016, the Company continued implementing its wastewater discharge reduction plan allowing for phased achievement of maximum permissible discharge rates for each substance subject to limits.

Norilsk Nickel's waste management efforts seek to ensure the repeated use of waste in its production cycle along with meeting statutory waste disposal limits. In 2016, the Company's waste disposal did not exceed the limits. Re-usable waste mostly comes from extraction of ore mineral resources, including mined rock crushing, backfilling of mined-out areas and pits, and construction and strengthening of tailing dumps.

/ Environmental protection / Environmental impact

In 2011, a new concentrate briquetting section was commissioned at Zapolyarny site of Kola MMC replacing the roasting section. Two new briquetting lines are now in operation, and the briquetting technology is being fine-tuned to meet the required quality standards. The full-fledged roll-out of the briquetting technology will reduce sulphur dioxide emissions generated by the production processes from 4.8 kt in 2016 to approximately 1.0 kt. Since the start of its operations in 1998, Kola MMC also implemented a number of other projects at Zapolyarny and Nickel sites that enabled it to bring down sulphur dioxide emissions from 188 kt in 1998 to 82.4 kt in 2016.

Monchegorsk site is currently implementing a Nickel Electrolysis Shop project that will allow for electrowinning of nickel from chlorine dissolved tube furnace nickel powder with the capacity of 120 kt of electrolytic nickel per annum. The project includes reconstruction of cathode nickel facilities in the nickel electrolysis shop to replace the existing electrorefining technology with electrowinning of nickel from chlorine dissolved tube furnace nickel powder. The new technology will help to reduce air emissions thanks to elimination of anode smelting.

# ENVIRONMENTAL IMPACT METRICS OF NORILSK NICKEL HARJAVALTA

Norilsk Nickel Harjavalta has all the necessary environmental permits and operates a certified integrated management system that meets the requirements of ISO 9001, ISO 14001 and OHSAS 18001. Its main environmental impact is emissions of ammonia (NH $_3$ ) and nickel into the air, and discharges of nickel (Ni), sulphates (SO $_4$  $^2$ ·) and ammonia ions (NH $_4$ \*) into water bodies. In 2016, Norilsk Nickel Harjavalta's actual emission, discharge and waste disposal volumes complied with the existing permits. Lower waste volumes came from the decreased use of feedstock from Terrafame (Talvivaara), as well as reduced processing of electric furnace matte from Boliden.

#### **Environmental impact metrics of Norilsk Nickel Harjavalta**

Indicator	2014	2015	2016
Industrial wastewater, thousand cubic meters	625	728	771
Pollutants in industrial wastewater, t			
Ni	0.4	0.4	0.4
SO <sub>4</sub> <sup>2-</sup>	19,281	20,051	22,457
NH <sub>4</sub> <sup>+</sup> (converted to nitrogen)	45.4	36.0	49.5
Total water consumption, mln cubic meters	10.9	10.4	10
Total air pollutant emissions, t			
Ni	1.8	1.7	1.6
$NH_3$	50	70	70
Waste generation, kt	30.8	16.5	7.0
Waste disposal, kt	29.8	15.7	0.8

<sup>&</sup>lt;sup>1</sup> Excluding 66,189 kg (Ni) discharged in July 2014 as Ni solution due to a heat exchanger failure at the reduction plant.

# Biodiversity conservation

#### COOPERATION WITH NATURE RESERVES



The Putoransky State Nature Reserve (Taimyr Peninsula)

The Putoransky State Nature Reserve (Taimyr Peninsula) was included on the UNESCO world heritage list in 2010. Boasting a total area of over 1,887,000 ha, it is home to 13 plant, 12 bird and 1 animal species listed on the Krasnoyarsk Territory's, Russia's and international Red Data Books. The reserve is part of the Joint Directorate of Taimyr Nature Reserves established in 2012, which includes the Putoransky, Taimyrsky and Big Arctic reserves, as well as the Purinsky and Severozemelsky natural protected areas. In 2016, the Joint Directorate of Taimyr Nature Reserves continued implementing three projects selected under Norilsk Nickel's World of New Opportunities charitable programme to support socially important initiatives. In the reporting year, the Company allocated approximately USD 100,000 to finance these projects, namely:

- Save the Bighorn Together (support for research and protection of this endangered species of the Putorana Plateau);
- Hatanga Crafts Festival (a space for demonstration, experience sharing and transfer of northern craftsmen's know-how in order to revive the indigenous peoples' forgotten crafts); and
- Environmental Camp (a summer field camp set up in the protected area of the Putoransky Nature Reserve).

In 2016, the Joint Directorate of Taimyr Nature Reserves also received the requested additional funds of approximately USD 36,000 used for the targeted purchase of various equipment.

The Company provides systemic support to nature reserves located in relative proximity to its production sites.



The Pasvik Nature Reserve (Kola Peninsula)

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The Pasvik Nature Reserve is featured as one of the Wetlands for the Shadow List of Ramsar Sites (the Ramsar Convention) under the name of Fjarvann – Schaannings Field Base. It covers a total area of over 14,000 ha and is home to rare species listed on the international and Russia's Red Data Books. Since 2006, as part of the contract signed with Kola MMC, the Pasvik Nature Reserve has been carrying out an ecological assessment of the natural environment in the area of Pechenganickel Plant (Zapolyarny, Nickel and their suburbs, including the Pasvik State Nature Reserve), and developing a long-term environmental monitoring programme.



/ Environmental protection / Biodiversity conservation



The Lapland State Nature Biosphere Reserve (Kola Peninsula)

The Lapland State Nature Biosphere Reserve is one of the largest protected areas in Europe covering over 278,000 ha. Since 2002, the Lapland Biosphere Reserve has been engaged in developing measures to reclaim disturbed natural environment in the areas affected by permanent air emissions from Severonickel Plant, and monitor areas adjacent to Monchegorsk site and the Lapland Biosphere Reserve, under the contracts signed with Kola MMC. The data obtained during a scientific research provided a basis for the subsequent contractual work to reclaim disturbed lands, and bring about sanitary and fire protection improvements in the forest areas. In 2016, the Company allocated approximately USD 130,000 to finance the projects of the Kola Peninsula nature reserves.

#### BIODIVERSITY RECOVERY

Norilsk Nickel's Polar Division is working on a project to breed valuable fish species and release them into natural water bodies. In 2016, it implemented a number of initiatives to compensate for the damage to water bodies of the Yenisei River caused by sand production at the Seredysh Island deposit in the 2015 summer navigation period. 14,917 Siberian sturgeon fingerlings grown at the Company's modern year-round fish breeding unit with recirculating acquaculture systems were released into the Yenisei River.

#### LAND RECLAMATION AND LANDSCAPING

The Company regularly allocates funds for landscaping in the municipalities of operation. Since 2003, Kola MMC, upon recommendation from the nature reserves, has rehabilitated 100 ha of area in Monchegorsk, Zapolyarny towns and Nickel settlement. For the past 12 years, Kola MMC has had approximately one million trees and bushes planted, including a pilot project to restore damaged land adjacent to the company's site together with the Kola Science Centre of the Russian Academy of Sciences. As part of the citywide programme for landscaping and restoration of urban landscapes and the surroundings of the city of Dudinka implemented in cooperation with the Dudinka municipal authorities, 2016 also saw the clean-up and improvement of external territories and areas adjacent to roads, as well as measures to protect water bodies and protected water zones, and tourist camping improvements.

Other environmental developments in 2016 included the Ecological Marathon launched by the Company in Norilsk as part of its Plant of Goodness corporate volunteer programme. Total related Norilsk Nickel's expenditure over the past year exceeded USD 7,000. As part of the Ecological Marathon, the Company had approximately 35 cubic meters of fertile soil brought to the sports stadium, 5 kg of perennial grass seeds sown, 75 seedlings of willow shrubbery planted, and 10 bird feeders made. Over 5 kg of batteries were collected at the reception point for used batteries.



For the past 12 years, Kola MMC has had approximately

mln trees and bushes planted

14,917
Siberian sturgeon fingerlings

grown and released into the Yenisei River

An action plan, including watering, winter insulation, fertilisation and spring crown formation, was developed for the volunteer teams to take care of the seedlings jointly with the staff of the Arctic Agriculture and Ecology Research Institute. These and other initiatives will be implemented as part of the Ecological Marathon in 2017.

In 2016, Monchegorsk hosted Let's Do It, a largeformat environmental festival focused on the clean-up of the Lumbolka Lake shore and the city park territory. It was part of Norilsk Nickel's Plant of Goodness corporate volunteer programme.

# **Energy efficiency**

The Norilsk Nickel Group's major production assets are located beyond the Arctic Circle with air temperature below the freezing point during eight months of the year. It is therefore critical for the Group to ensure reliable and high-quality power supply to its enterprises, as well as to the infrastructure facilities and population in the regions where it operates.

In 2016, Norilskgazprom implemented a number of organisational arrangements and upgrades of its key power equipment as part of the Energy Saving and Energy Efficiency Programme, which enabled the saving of 25 mln cubic meters of natural gas.

The Company also uses electric power generated from renewable energy sources at NTEK's Ust-Khantayskaya and Kureyskaya HPPs (installed capacity of 441 MW and 600 MW, respectively).

In 2016, the share of renewable energy stood at 25% for the Norilsk Nickel Group and 38% for its Polar Division.

In 2017–2020, the Company will continue to renovate and upgrade the main power equipment and transmission devices along with waste water treatment systems.

#### Energy consumption by PJSC "MMC "NORILSK NICKEL"1

		2016
Type of energy resource	Consumption in volume terms	Consumption, thousand RUB
Heat power, Gcal	5,587,849	4,594,881
Electric power, thousand kWh	5,158,974	5,259,718
Motor fuel, t	344	17,797
Diesel fuel, t	58,671	2,657,599
Heating oil, t	40,479	582,489
Natural gas, thousand cubic meters	545,712	1,363,718
Coal, t	0	0
Aviation fuel, t	115	5,008

#### Energy consumption by Norilsk Nickel Group<sup>1</sup>

Energy consumption by Normak Nicker Group								
	2014		2014 2015		2015		2016	
Type of energy resource	Consumption in volume terms	Consumption, thousand RUB	Consumption in volume terms	Consumption, thousand RUB	Consumption in volume terms	Consumption, thousand RUB		
Heat power, Gcal	8,800,391	6,972,592	8,523,826	6,856,778	8,970,953	7,542,227		
Electric power, thousand kWh	10,357,673	11,751,583	10,314,243	12,886,849	9,558,443	12,947,152		
Motor fuel, t	2,473	90,177	2,543	90,760	2,636	114,547		
Diesel fuel, t	134,478	4,358,366	132,696	4,693,653	134,436	5,172,394		
Heating oil, t	249,146	2,955,766	245,237	2,422,476	256,905	2,262,086		
Natural gas, thousand cubic meters	3,772,668	8,374,359	3,225,467	7,619,982	3,357,366	8,386,866		
Coal, tonnes	171,347	262,397	161,945	254,454	94,746	222,096		
Aviation fuel, t	80,580	2,560,469	76,767	2,432,656	96,621	2,910,683		

<sup>&</sup>lt;sup>1</sup> No others types of energy resources were used besides those specified in the table.

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# FINANCIAL OVERVIEW (MD&A)

# Key consolidated highlights

USD million (unless stated otherwise)	2016	2015	Change
Revenue	8,259	8,542	(3%)
EBITDA <sup>1</sup>	3,899	4,296	(9%)
EBITDA margin	47%	50%	(3 p.p.)
Net profit	2,531	1,716	47%
Capital expenditures	1,695	1,654	2%
Free cash flow <sup>2</sup>	1,591	2,405	(34%)
Normalised net working capital <sup>2</sup>	739	1,030	(28%)
Net debt <sup>2</sup>	4,551	4,212	8%
Net debt /EBITDA	1.2x	1.0x	0.2x
Dividends paid per share (USD) <sup>3</sup>	7.8	18.1	(57%)



#### **FY 2016 HIGHLIGHTS**

- Onsolidated revenue decreased 3% yearon-year to USD 8.3 billion on the back of lower realized prices of the company's metal basket (down 13% y-o-y). Lower metal prices and a oneoff decrease of production volumes owing to the downstream reconfiguration were partly offset by the sales of metal stock accumulated in 4Q2015.
- EBITDA decreased by 9% y-o-y (or by USD 397 million) to USD 3,899 million with EBITDA margin amounting to 47% (down from 50% in 2015). EBITDA reduced primarily as result of the decrease in realized metal prices and local currency inflation, which were partially compensated for by RUB depreciation against US Dollar and the sale of temporary metal stock, accumulated in the end of 2015.
- Net profit increased 47% y-o-y to USD 2.5 billion mainly due to appreciation of RUB as of the end of the reported period.
- CAPEX was practically unchanged y-o-y (up 2%) at USD 1.7 billion and was in line with the average capex level for the last 3 years. Major investments in 2016 included projects related to the shutdown of Nickel Plant, capacity expansion and modernization of Talnakh Concentrator and Nadezhda Plant as well as an active construction phase of the Bystrinsky (Chita) project.

- Free cash flow amounted to USD 1.6 billion with FCF/revenue ratio reaching the global mining industry-leading 19%.
- Normalized net working capital decreased 28% y-o-y to USD 0.7 billion (or to USD 0.4 billion including the one-off increase of short-term payables resulting from concentrate purchase from Rostec) driven mainly by the saleable metal inventory release.
- Net debt increased by 8% y-o-y to USD 4,551 million with Net debt/EBITDA ratio increasing to 1.2x from 1.0x a year ago.
- The Company remained one of the highest dividend-yielding stocks in the global mining industry. The Company paid interim dividend for 9M 2016 of a total USD1.2 billion or USD 7.4 per share.

<sup>&</sup>lt;sup>1</sup> A non-IFRS figure, for the calculation see the notes below

A non-IFRS figure, for the calculation see an analytical review document ("Data book") available in conjunction with Consolidated IFRS Financial Results on the Company's web site.

Paid during the current period.

# Key segmental highlights

USD million (unless stated otherwise)	2016	2015	Change
Revenue	8,259	8,542	(3%)
Group GMK <sup>1</sup>	6,194	6,590	(6%)
Group KGMK <sup>2</sup>	664	773	(14%)
NN Harjavalta	727	757	(4%)
Other metallurgical	7	30	(77%)
Other non- metallurgical	1,699	1,182	44%
Eliminations	(1,032)	(790)	31%
EBITDA	3,899	4,296	(9%)
Group GMK <sup>1</sup>	3,883	4,429	(12%)
Group KGMK <sup>2</sup>	117	257	(54%)
NN Harjavalta	45	63	(29%)
Other metallurgical	(11)	(12)	(8%)
Other non-metallurgical	119	(81)	(247%)
Eliminations	112	26	4x
Unallocated	(366)	(386)	(5%)
EBITDA margin	47%	50%	(3 p.p.)
Group GMK <sup>1</sup>	63%	67%	(4 p.p.)
Group KGMK <sup>2</sup>	18%	33%	(15 p.p.)
NN Harjavalta	6%	8%	(2 p.p.)
Other metallurgical	(157%)	(40%)	(117 p.p.)
Other non- metallurgical	7%	(7%)	14 p.p.

## Revenue

#### REVENUE BY SEGMENT

In 2016, revenue of Group GMK segment decreased 6% y-oy, while revenue of Group KGMK segment was down by 14% y-o-y, to USD 6,194 million and USD 664 million, respectively. In both segments the revenue decline was primarily driven by lower realized metal prices. In Group GMK segment this negative effect was partly offset by the sale of metal stocks.

Revenue of NN Harjavalta decreased 4% y-o-y to USD 727 million. This was primarily driven by lower realized metal prices, which was partly compensated for by an

increase of metals output resulting from the reconfiguration of the Company's metallurgical facilities in Russia.

Revenue of Other metallurgical segment decreased 77% y-o-y to USD 7 million following the sale of international assets in 2015.

Revenue of Other non-metallurgical segment increased 44% y-o-y to USD 1,699 million owing to the increased revenue of the Group's trading subsidiaries, resulting from recovery in metal prices and the sale of metal stocks in 2016.

Includes Polar division and subsidiaries, supporting production in Norilsk.

<sup>&</sup>lt;sup>2</sup> Includes Kola MMC and subsidiaries located in Monchegorsk agglomeration.

#### / Financial Overview / Revenue

Sales	volume	and	revenue
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Sales volume and revenue			
	2016	2015	Change
REFINED METALS			
Russian operations			
Nickel, thousand t	218	197	11%
Copper, thousand t	374	343	9%
Palladium, koz	2,779	2,464	13%
Platinum, koz	669	590	13%
Finland			
Nickel, thousand t	53	43	23%
SEMI-PRODUCTS		-	
Finland			
Copper cake, copper, thousand t <sup>1</sup>	10	13	(23%)
Botswana			
Nickel concentrate, nickel, thousand t <sup>1</sup>	-	1	(100%)
Nickel concentrate, copper, thousand t <sup>1</sup>	-	1	(100%)
South Africa			
Nickel concentrate, nickel, thousand t <sup>1</sup>	13	4	225%
Nickel concentrate, copper, thousand t <sup>1</sup>	6	2	3x
METAL SALES			
Group			
Nickel, thousand t <sup>2</sup>	271	240	13%
Copper, thousand t <sup>2</sup>	374	343	9%
Palladium, koz²	2,779	2,464	13%
Platinum, koz²	669	590	13%
Gold, koz <sup>2</sup>	155	93	67%
Rhodium, koz²	85	84	1%
Cobalt, thousand t <sup>2</sup>	5	5	
Silver, koz²	2,565	1,915	34%
Semi-products, nickel, thousand t	13	5	160%
Semi-products, copper, thousand t <sup>1</sup>	15	16	(6%)
Semi-products, palladium, koz¹	115	100	15%
Semi-products, platinum, koz¹	43	39	10%
Semi-products, gold, koz¹	9	9	
Semi-products, silver, koz <sup>1</sup>	148	142	4%

Metal volumes are given in respect of metals contained in semi-products.
 All information is reported on the 100% basis, excluding sales of metals purchased from third parties.

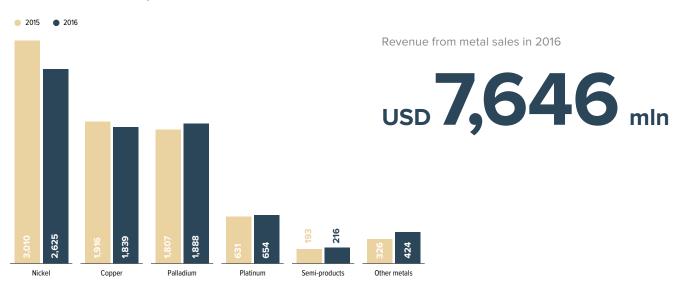
Average realized prices of metals produced by Norilsk Nickel in Russia from its own feed

Metal	2016	2015	Change
Nickel (USD / t)	9,720	11 962	(19%)
Copper (USD / t)	4,912	5,585	(12%)
Palladium (USD / oz)	614	695	(12%)
Platinum (USD / oz)	977	1,057	(8%)
Cobalt (USD / t)	24,091	26,291	(8%)
Gold (USD / oz)	1,254	1,162	8%
Rhodium (USD / oz)	669	884	(24%)

#### Revenue

USD mln	2016	2015	Change
Nickel	2,625	3,010	(13%)
Copper	1,839	1,916	(4%)
Palladium	1,888	1,807	4%
Platinum	654	631	4%
Semi-products	216	193	12%
Other metals	424	326	30%
Revenue from metal sales	7,646	7,883	(3%)
Revenue from other sales	613	659	(7%)
Total revenue	8,259	8,542	(3%)

#### Revenue from metal sales, USD mln



/ Financial Overview / Revenue



#### Nickel

Nickel remained the largest contributor to the Group's revenue comprising 34% of total metal sales in 2016 down from 38% in 2015 as nickel price fell the most relative to other metals within the Company's commodity basket.

In 2016, nickel revenue decreased by 13% y-o-y (or USD 385 million) to USD 2,625 million primarily due to lower nickel price (–USD 612 million) and reduction in re-sale of nickel purchased from third parties to meet contractual obligations (–USD 71 million), which was partly offset by higher sales volume of nickel produced from own feed (+USD 298 million).

The average realized price of nickel produced in Russia from own feed decreased by 19% y-o-y to USD 9,720 per tonne in 2016 from USD 11,962 per tonne in 2015.

Sales volume of nickel produced in Russia from own feed increased by 10% y-o-y (or 20 kt) to 215 kt. The increase in sales volume was primarily driven by the sale of metal from a temporary stock accumulated by the Company in the fourth quarter 2015.

The volume of nickel sales from purchased semiproducts increased by 1 kt to 3 kt in 2016.

Sales volume of nickel produced by Norilsk Nickel Harjavalta increased by 23% y-o-y in 2016 to 53 kt as Harjavalta started to process the Company's own Russian feed in line with downstream reconfiguration.



#### Copper

In 2016, copper sales accounted for 24% of the Group's total metal sales, down 4% y-o-y (or USD 77 million) to USD 1,839 million primarily owing to lower realized copper price (–USD 231 million) which was partly offset by the increase in sales volume (+USD 154 million).

The average realized price of copper produced in Russia from own feed was down by 12% y-o-y to USD 4,912 per tonne in 2016 from USD 5,585 in 2015.

Physical volume of copper sales from Russian feed increased by 9% y-o-y (or 29 kt) to 369 kt. The increase in sales volumes was driven by sale of metal from the temporary stock, which was built in the fourth quarter 2015.



#### **Palladium**

In 2016, palladium sales accounted for 25% of the Group's total metal revenue. The Group's palladium revenue increased by 4% y-o-y (or by USD 81 million) to USD 1,888 million. The negative impact of lower realized price (–USD 201 million) was partly offset by the increased sales volumes (+USD 193 million). Additional USD 184 million of palladium revenue in 2016 came from the re-sale of metal purchased in the open market to fulfil the Company's contractual obligations (vs USD 95 million in 2015).

Sales of palladium produced in Russia from own feed remained unchanged y-o-y at USD 1,692 million. The revenue decline owing to lower realized palladium price (down 12% y-o-y) from USD 695 per troy ounce in 2015 to USD 614 per troy ounce in 2016 was fully compensated by higher palladium sales volume (up 13% y-o-y) resulting from the sale of metal from temporary stock.



#### **Platinum**

In 2016, platinum sales accounted for 9% of the Group's total metal revenue. The platinum revenue increased by 4% y-o-y (or by USD 23 million) to USD 654 million primarily due to higher volumes of platinum sales (+USD 77 million) which was partly negatively offset by both lower realized platinum price (–USD 46 million) and lower re-sale of platinum purchased from third parties to meet contractual obligations (–USD 8 million).

The revenue from platinum produced in Russia from own feed increased by 6% y-o-y to USD 645 million. The revenue increased despite an 8% y-o-y decline in the average realized platinum price (from USD 1,057 per troy ounce in 2015 to USD 977 per troy ounce in 2016), which was fully offset by the increase in sales volumes (up 15% y-o-y) resulting from the sale of metal from temporary stock.

#### Other metals

The other metals revenue was up 30% y-o-y (or by USD 98 million) to USD 424 million owing to the increase in gold (up 80%), silver (up 46%) and cobalt (up 15%) revenues which was partly negatively offset by lower rhodium revenue (down 23%).

Increase of revenue from other metals was driven by the physical sale volumes owing to stock sale (USD 103 million), partly offset by lower realized prices (–USD 5 million).

#### **Semi-products**

In 2016, semi-products revenue (copper cake and nickel concentrate) increased by 12% y-o-y (or by USD 23 million) to USD 216 million, and accounted for 3% of the Group's total metal revenue. The increase was mainly driven by higher physical sales to third parties instead of intragroup sales for further processing.

#### OTHER SALES

In 2016, the other sales revenue of USD 613 million was down by 7% y-o-y primarily due to Russian rouble depreciation against US dollar (negative effect of USD 51 million) and divestiture of non-core assets (negative effect of USD 73 million), which was partly positively offset by the increase of prices of services provided to third parties (positive effect by USD 16 million). Additionally, the other sales increased in real terms (USD 62 million) primarily as result of higher revenue of the Company's transport subsidiaries.

### Cost Of Metal Sales

#### COST OF METALS SALES

In 2016, the cost of metal sales increased by 15% y-o-y (or by USD 486 million) to USD 3,651 million owing to:

- Reduction of cash operating costs by 3% y-o-y (USD 92 million);
- Decrease in depreciation charges by 4% y-o-y (USD 20 million);
- Change in metal inventories y-o-y (cost increase by USD 598 million) due to the sale of temporary metal stock.

Total cost of metal sales in 2016



/ Financial Overview / Cost Of Metal Sales

#### CASH OPERATING COSTS

In 2016, total cash operating costs decreased by 3% y-o-y (or by USD 92 million) to USD 2,905 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to USD 175 million in terms of cost reduction.

Inflationary growth of cash operating costs (USD 169 million) was partly offset by cost reduction due to sale of foreign assets in 2015 (USD 27 million) and other factors (USD 59 million) including decrease of purchases of metals for resale, raw materials and semi-products.

USD mln	2016	2015	Change
Cash operating costs			
Labour	1,145	1,131	1%
Purchases of metals for resale, raw materials and semi-products	555	718	(23%)
Materials and supplies	520	459	13%
Third-party services	170	186	(9%)
Mineral extraction tax and other levies	122	128	(5%)
Electricity and heat energy	101	108	(6%)
Transportation expenses	89	75	19%
Fuel	60	66	(9%)
Sundry costs	143	126	13%
Total cash operating costs	2,905	2,997	(3%)
Depreciation and amortisation	456	476	(4%)
Decrease/(increase) of metal inventories	290	(308)	
Total cost of metal sales	3,651	3,165	15%

#### Labour

In 2016, labour costs increased by 1% y-o-y (or by USD 14 million) to USD 1,145 million amounting to 39% of the Group's total cash operating costs in 2016 driven by the following:

- USD 97 million cost reduction due to the Russian rouble depreciation against US Dollar;
- USD 111 million costs increase driven by the indexation of RUB-denominated salaries and wages and the headcount increase primarily at Kola MMC owing to the ongoing downstream reconfiguration program.

# Purchases of metals for resale, raw materials and semi-products

In 2016, expenses on the purchase of metals for resale, raw materials and semi-products decreased by USD 163 million y-o-y to USD 555 million.

Decrease in purchased concentrates and matte was driven by lower metal prices (USD 45 million) and lower volume of semi-products purchased by NN Harjavalta for further processing (USD 158 million) owing to increased processing of the Group's own Russian feed.

This cost reduction was partly negatively offset by the increase in the volume of semi-products purchased by NN Harjavalta (cost increase by USD 37 million) owing to the replacement of a tolling contract with Boliden with a sale and purchase agreement.

Expenses for metals purchased for re-sale to fulfill contractual obligations increased by USD 11 million y-o-y.

#### Materials and supplies

In 2016, materials and supplies expenses increased by 13% y-o-y (or by USD 61 million) to USD 520 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 26 million.

The increase of the cost of materials and supplies in real terms was driven by the following:

- USD 38 million local-currency inflation;
- USD 49 million other factors driven by repairs of mining equipment as well as the equipment at Nadezhda metallurgical plant and Kola MMC.

#### Third-party services

In 2016, cost of third party services decreased by 9% y-o-y (or by USD 16 million) to USD 170 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 13 million.

Other changes in third party services in real terms were driven by the following:

- USD 19 million cash cost reduction due to the divestiture of Tati Nickel in April 2015;
- USD 10 million decrease in tolling expenses due to replacement of tolling contract with Boliden with a semi-products sale and purchase agreement at NN Harjavalta;
- USD 26 million increase in other services, primarily due to inflation.

#### Mineral extraction tax and other levies

In 2016, mineral extraction tax and other levies decreased by 5% y-o-y (or by USD 6 million) to USD 122 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 11 million.

The increase in cash cost in real terms (USD 5 million) was due to higher cost of mined ore, partly offset by decrease in pollution levies.

#### **Electricity and heat energy**

In 2016, electricity and heat energy expenses decreased by 6% (or by USD 7 million) y-o-y to USD 101 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 8 million.

The increase of the cost of materials and supplies in real terms was driven by the following:

- USD 4 million increase in energy tariffs owing to domestic inflation;
- USD 3 million decrease in expenses primarily due to sale of Tati Nickel in April 2015.

#### **Transportation expenses**

In 2016, transportation expenses increased by 19% (or by USD 14 million) y-o-y to USD 89 million, primarily due to increase in metal and semi-products shipment volumes.

#### Fuel

Fuel expenses decreased by 9% y-o-y (or by USD 6 million) to USD 60 million primarily due to Russian rouble depreciation against US Dollar.

#### **Sundry costs**

In 2016, sundry costs increased by 13% y-o-y (or by USD 17 million) to USD 143 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 10 million.

The increase in sundry costs in real terms by USD 27 million was driven primarily by domestic inflation.

#### **Depreciation and amortisation**

In 2016, depreciation and amortisation decreased by 4% y-o-y (or by USD 20 million) and amounted to USD 456 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to cost reduction by USD 40 million.

An increase in depreciation charges in real terms (USD 20 million) was mainly due to additions of mining and refining assets in 2016, which was partly offset by impairment of gas producing assets at the end of 2015.

#### Decrease/(increase) of metal inventories

Comparative effect of change in metal inventory amounted to USD 598 million in terms of increase in cost of metal sales.

This resulted mainly from the accumulation of metal in a temporary stock in 2015 and its consequent sale in 2016.

/ Financial Overview / Cost Of Metal Sales

#### COST OF OTHER SALES

In 2016, cost of other sales decreased by 18% y-o-y to USD 508 million.

Positive effect of Russian rouble depreciation against US Dollar amounted to USD 52 million in terms of cost reduction.

Decrease of cost of other sales in real terms (by USD 56 million) was driven by the following factors:

- USD 65 million cost reduction due to sale of noncore assets (primarily Nordavia-RA);
- USD 22 million increase in transportation companies expenditures owing to the business expansion:
- USD 13 million cost reduction due to other factors.

#### SELLING AND DISTRIBUTION EXPENSES

USD mln	2016	2015	Change
Export duties	61	78	(22%)
Staff costs	13	19	(32%)
Transportation expenses	5	8	(38%)
Marketing expenses	7	15	(53%)
Other	7	9	(22%)
Total	93	129	(28%)

Selling and distribution expenses decreased by 28% y-o-y (or by USD 36 million) to USD 93 million. The decline was driven by decrease of export duties by 22% (or by USD 17 million) owing to the cancellation of PGM export duties in September, 2016 as part of Russian Federation WTO accession package.

Further cost reduction resulted from the following factors:

- USD 6 million effect of Russian rouble depreciation against US dollar;
- USD 8 million decrease in marketing expenses driven by the reduced marketing campaigns in Asia and Europe.

#### GENERAL AND ADMINISTRATIVE EXPENSES

USD mln	2016	2015	Change
Staff costs	376	352	7%
Taxes other than mineral extraction tax and income tax	58	54	7%
Third party services	55	55	_
Rent expenses	19	19	_
Depreciation and amortisation	20	19	5%
Transportation expenses	6	4	50%
Other	47	51	(8%)
Total	581	554	5%

In 2016, general and administrative expenses increased by 5% y-o-y (or by USD 27 million) to USD 581 million. The staff costs increased 7% y-o-y (or USD 24 million) driven primarily by salaries

revision in line with domestic inflation and higher property tax, up by 7% or by USD 4 million owing to the increase of property, plant and equipment balance.

#### FINANCE COSTS

USD mln	2016	2015	Change
Interest expense on borrowings net of amounts capitalized	403	281	43%
Unwinding of discount on provisions	46	44	5%
Other	4	1	4x
Total	453	326	39%

Increase in finance costs by 39% y-o-y to USD 453 million was driven by cumulative effect of the following factors:

- Reduction in relatively low interest bearing debt owing to the repayment of a syndicated loan from a consortium of international banks, raised in 2013;
- Increase of the Group's floating rate debt cost due to multiple increases of LIBOR rates;
- Increase of RUB denominated share of loans and borrowings during 2014-2016.

These factors were partly offset by the refinancing of some of the Group's debt in 2016, which resulted in extending maturity and reducing interest rate margins on some of the Group's USD denominated debt with floating interest.

#### INCOME TAX EXPENSE

Bln 2016, income tax expense increased by 41% y-o-y to USD 745 million driven mostly by the increase of taxable profit owing to comparative effect of RUB appreciation against US dollar as of 31.12.2016 versus RUB depreciation as of 31.12.2015. This effect was partly offset by the decline of revenue.

The effective income tax rate in 2016 of 22.7% was above the Russian statutory tax rate of 20%. This was primarily driven by non-deductible social expenses, impairment of financial and non-financial assets, writeoffs and allowance for deferred tax assets. These factors were partly offset by the effect of varying tax rates applied on international subsidiaries of the Group.

#### Income tax expense

USD min	2016	2015	Change
Current income tax expense	686	506	36%
Deferred tax expense	59	22	3x
Total	745	528	41%

#### The break up of the current income tax expense by geography

USD mln	2016	2015	Change
Russian Federation	679	490	39%
Finland	5	14	(64%)
Rest of the world	2	2	_
Total	686	506	36%

/ Financial Overview /

### **EBITDA**

USD mln	2016	2015	Change
Operating profit	3,281	3,506	(6%)
Depreciation and amortisation	557	506	10%
Impairment of non-financial assets	61	284	(79%)
EBITDA	3,899	4,296	(9%)
EBITDA margin	47%	50%	(3 p.p.)

In 2016, EBITDA of Group GMK segment decreased 12% y-o-y to USD 3,883 million. The reduction was mostly driven by lower metal prices and cost inflation, partly offset by the sale of metal stocks and effect of RUB depreciation on cash costs.

EBITDA of Group KGMK segment was down by 54% y-o-y to USD 117 million primarily due to lower metal prices and downstream reconfiguration. This negative effect was partly offset by the decrease in cash costs driven by the depreciation of RUB against USD.

EBITDA of NN Harjavalta decreased by 29% y-o-y to USD 45 million primarily due to revenue decline resulting from lower metal prices.

EBITDA of Other non-metallurgical segment increased by USD 200 million in 2016 and turned positive USD 119 million primarily as a result of the increase in sales margin of the Group's trading subsidiaries.

# Net profit before impairment charges and foreign exchange (gains)/losses

USD mln	2016	2015	Change
Net profit	2,531	1,716	47%
Impairment of non-financial assets and available for sale investments	214	284	(25%)
Foreign exchange (gain)/loss	(485)	865	(156%)
Loss from disposal of subsidiaries and assets classified as held for sale	4	302	(99%)
Net profit before impairment charges and foreign exchange (gains)/losses	2,264	3,167	(29%)

EBITDA in 2016

USD 3,899 mln

Net profit in 2016

USD 2,531 mln

USD mln	2016	2015	Change
Cash generated from operations before changes in working capital and income tax	3,958	4,489	(12%)
Movements in working capital	64	(112)	(157%)
Income tax paid	(530)	(672)	(21%)
Net cash generated from operating activities	3,492	3,705	(6%)
Capital expenditure	(1,695)	(1,654)	2%
Other investing activities	(206)	354	(158%)
Net cash used in investing activities	(1,901)	(1,300)	46%
Net cash used in financing activities	(2,399)	(998)	140%
Effects of foreign exchange differences on balances of cash and cash equivalents	37	(113)	(133%)
Other	18	(33)	(155%)
Net (decrease)/increase in cash and cash equivalents	(753)	1,261	(160%)

In 2016, net cash generated from operating activities decreased by 6% y-o-y to USD 3.5 billion owing to the following:

- –USD 397 million decrease in EBITDA;
- +USD 176 million decrease of working capital in 2016 and respective increase in 2015 due to realization of temporary metal stock accumulated in 2015.

Reconciliation of the net working capital changes between the balance sheet and cash flow statement is presented below.

USD mln	2016	2015
Change of the net working capital in the balance sheet	587	57
One-off factors <sup>1</sup>	(296)	-
Normalized change of the net working capital in the balance sheet, less:	291	57
Foreign exchange differences	38	(357)
Change in income tax payable	(161)	89
Change of working capital within assets classified as held for sale	-	12
Other changes, including reserves	(104)	87
Change of working capital per cash flow	64	(112)

<sup>&</sup>lt;sup>1</sup> Related to the purchase of copper concentrate from Rostec.

#### / Financial Overview / Statement of cash flows

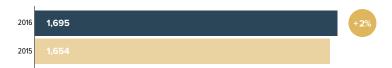
#### CAPEX breakdown by project is presented below:

USD mln	2016	2015	Change
Polar Division, including:	884	989	(11%)
Skalisty mine	153	256	(40%)
Taymirsky mine	68	72	(6%)
Komsomolsky mine	40	45	(11%)
Oktyabrsky mine	59	70	(16%)
Talnakh enrichment plant	253	257	(2%)
Reconstruction/modernisation of production facilities related with closing of Nickel plant	24	61	(61%)
Kola MMC	89	118	(25%)
Chita (Bystrinsky) project	269	107	151%
Other production projects	107	151%	(2%)
Other non-production assets	5	4	20%
Intangible assets	47	28	68%
Total	1,695	1,654	2%

In 2016, CAPEX increased by 2 % y-o-y to USD 1.7 billion primarily due to construction of Chita (Bystrinsky) project.

In 2016, other investing activities changed by USD 560 million and became negative USD 206 million primarily due to investments in skiing resort in Sochi in 2016 as compared to positive USD 354 million in 2015 resulting primarily from the proceeds from the sale of shares of utilities' stocks.

#### CAPEX, USD mln



In 2016, CAPEX in Chita project was

USD 269 mln

In 2016, CAPEX in Talnakh enrichment plant was



USD mln	As of December 31 2016	As of December 31 2015	Change, USD million	Change
Long-term	7,274	7,142	132	2%
Short-term	578	1,124	(546)	(49%)
Total debt	7,852	8,266	(414)	(5%)
Cash and cash equivalents	3,301	4,054	(753)	(19%)
Net debt	4,551	4,212	339	8%
Net debt /EBITDA	1.2x	1.0x	0.2x	

As of December 31, 2016, the Company reduced its total debt by 5% y-o-y (or by USD 414 million) to USD 7,852 million. The Company's short-term debt decreased by 49% y-o-y to USD 578 million while the long-term debt increased by 2% y-o-y (or USD 132 million). As of December 31, 2016, the share of short-term debt in the total debt portfolio decreased to 7% from 14% as of December 31, 2015.

Net debt increased by 8% y-o-y to USD 4,551 million with Net debt/EBITDA ratio increasing to 1.2x from 1.0x a year ago.

In 2016, in accordance with its financial strategy the Group continued to focus on maintaining the average duration of debt portfolio, while also reducing medium-term repayments. In line with this strategy in 2016, the Group amended the terms of the existing outstanding bilateral credit lines with a number of banks for a total amount of USD 1.4 billion by extending debt maturities and reducing interest rates. By the end of 2016, the 2018 debt redemptions due got substantially reduced, thus pushing back any potential refinancing risks to the medium term.

In 2016, a Group's subsidirary, GRK Bystrinskoye LLC, signed up for an up to USD 800 million 8-year facility agreement with Sberbank CIB to finance the construction of Bystrinskiy mining and concentration complex (Bystrinskiy project) in Zabaykalsky Region (Chita region). The facility was based on a standalone assessment by the lender of Bystrinskiy Project's future financial performance and was structured as a project financing with no-recourse to Norilsk Nickel.

In order to preserve sufficient liquidity cushion and achieve the right balance between cash reserves and more flexible and cost efficient financial instruments, in 2016, the Group signed two 5-year committed revolving back-stop credit facilities with a number of international banks including Asia-Pacific institutions for a total consideration of approximately USD 1.2 billion. Furthermore, the Company extended the availability period of a committed back-stop long-term credit facility with a Russian bank. As a result, the Group has more than USD 2 billion of available diversified medium-term liquidity sources in the form of committed undrawn credit lines from Russian, Western and Asian banks.

In 2016, the Company's credit ratings assigned by S&P Global and Fitch Ratings were confirmed at investment grade level of BBB— and BBB—, respectively, while Fitch revised the Company's outlook from "Negative" to "Stable". The Company's credit rating by Moody's Investors Service remained at the level of Ba1 capped by Russia sovereign country celling.



# MAINTAINING CORPORATE CULTURE

# AS ADDED VALUE FOR STAKEHOLDERS



03

# CORPORATE GOVERNANCE

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130 Group Profile Strategic Report Corporate Governance

# FROM THE DEPUTY CHAIRMAN OF THE BOARD OF DIRECTORS



Corporate governance is key to the success of MMC Norilsk Nickel as a public company. The Corporate Governance, Nomination and Remuneration Committee, alongside the Board of Directors, works hard to implement the best corporate governance practices and procedures across the Company. This goes beyond the pragmatics of investor appeal and shareholder confidence, and becomes an essential tool to improve the efficiency of our operations and maintain our competitive edge. The Corporate Governance **Excellence Programme launched** by the Committee has been in place since 2014.

# Corporate Governance Excellence Programme

In 2014, as part of this programme, our shareholders approved the Directors' Remuneration Policy and set fixed annual remuneration for non-executive directors, taking into account their roles, such as chairing the Board, chairing a committee or being a member of a committee, and officially refused from performance-based bonuses and options.

In September 2014, the Board adopted the Directors' Code of Corporate Conduct and Business Ethics that outlines their fundamental duties, such as maintaining the highest standards of business ethics, acting in the best interests of the Company, and not using any insider information.

In November 2014, the Board endorsed the Company's Anti-Corruption Policy that addresses compliance with anti-corruption statutes, prevention, identification and elimination of factors that may breed corruption.

In December 2014, the Board of Directors adopted the Directors' Professional Development Policy that includes an onboarding programme for newly elected directors designed to help them learn about the Company's major assets, strategy, business practices, corporate structure, key management members, and Board procedures, as well as an annual professional development programme. The Board of Directors updates this programme every year, following the annual performance review, with account of each director's qualifications, experience, needs, and suggestions.

In January 2015, the Board adopted the Directors' Performance Assessment Policy calling for both self-assessment and independent audits. Starting from February 2015, the self-assessment exercise has been run on a regular basis.

In 2015, as part of implementation of the Code of Corporate Conduct, the Board adopted the Policy for Development and Approval of Voting Recommendations in respect of Candidates to the Board of Directors of the Company defining the major principles and procedure for the Board of Directors to prepare recommendations on voting at the General Meeting of Shareholders on election of directors.

Additionally, in 2016, we adopted the Dividend Policy and the revised Regulations on the Committees of the Board of Directors (including those in charge of corporate governance, nomination and remuneration, strategy, audit, and budget), and implemented a programme requiring the members of the Company's governance bodies to disclose their affiliations. In 2017, the Company is committed to continuous improvement of its corporate governance framework, policies and procedures following the standards set by the Corporate Governance Code endorsed by the Bank of Russia. First and foremost, our focus will be on sustainable development and corporate responsibility, efficient operation of the Board of Directors and its committees, improvements to internal audit procedures, transparency and disclosure practices. When it comes to our shareholders and investors, we strive to go beyond the mandatory legal compliance and to ensure adequate disclosure and transparency.

Group Profile

MMC Norilsk Nickel follows the general guidelines of the Corporate Governance Code endorsed by the Bank of Russia.

We make every effort to implement and improve our corporate governance practices and procedures in line with its provisions.

A full report on compliance with the Code can be found in the Additional Information section of this Annual Report.

## **Board of Directors**

The Board of Directors is in charge of the overall strategic management of the Company, its long-term sustainable development, strategic goal-setting and oversight of the Company's executive bodies. Throughout the year, the Board tackled such issues as overhauling our corporate strategy and reviewing the outcomes of several function-specific strategies, including sales and marketing, transportation and logistics, long-term production planning, and human capital development. The environmental issues, including the sulphur emissions reduction programme, have been our highest priorities. In 2017, we plan to continue the work in progress and focus on our corporate risk management system.

The Chairs of the Board and its committees do their best to provide a positive environment for resolving all matters on their respective agendas, taking

into account the opinions of non-executive and independent directors. One other thing that makes the Board of Directors truly efficient is its diversity, including the involvement of independent directors whose expertise in mining, finance and strategic management helps us to strengthen and advance our leadership in the global mining industry.

The Board Committees have made a great contribution to its activities: they pre-screened more that half of the matters brought to the attention of the Board. We are committed to continuous improvement of our corporate governance practices in 2017. Our Corporate Governance, Nomination and Remuneration Committee, the Board of Directors and the management team are aware of the challenges we face and are certain that we shall overcome them.

>50%

ot the matters the Board Committees pre-screened before brought to the attention of the Board of Directors C. Ty-6

**Andrey Bougrov** 

Deputy Chairman of the Board of Directors, PJSC "MMC "Norilsk Nickel"

# CORPORATE GOVERNANCE FRAMEWORK

Our corporate governance framework is designed to take into account and balance the interests of shareholders, the Board of Directors, managers and employees, as well as other stakeholders.

# **Principles**

We are guided by the applicable laws of the Russian Federation and principles set forth in the Corporate Governance Code that has become a key source for development of the Company's internal regulations and a guidance to nurture best corporate governance practices.

Our core corporate governance values are:

- equitable and fair treatment of every shareholder;
- professionalism and leadership of the Board of Directors;
- accountability of the Board of Directors and executive bodies;
- corporate social responsibility;
- transparent and timely disclosure;
- anti-corruption measures.

### Structure

#### GENERAL MEETING OF SHAREHOLDERS

This is the supreme corporate body of the Company.

Its exclusive authority includes:

- amending and supplementing the Company's Charter and approving the revised Charter;
- restructuring and liquidating the Company;
- increasing and/or decreasing the authorised capital;
- splitting and/or consolidating the Company's shares:
- electing members of the Board of Directors, the Audit Commission and the President, and approving the Company's auditors;
- approving annual reports, accounting/financial statements, and internal regulations on the Company's corporate bodies;
- distributing annual profit, including dividends;
- making arrangements for dividend payouts after the first quarter, six months, and nine months of the reporting year.

The General Meeting of Shareholders is convened on the annual basis. It takes place no sooner than three and no later than six months following the end of the preceding financial year. The scope of the Annual General Meeting's authority includes election of members of the Board of Directors and the Audit Commission, as well as approval of annual reports and accounting/financial statements of the Company.

Extraordinary General Meetings of Shareholders may be convened by the Board of Directors, or at request of the Audit Commission, the Company's auditor, or shareholder(s) owning at least 10% of the Company's voting shares.

Except for the cumulative voting for the Board of Directors, each voting share is counted as one vote at the General Meeting.

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/ Corporate governance framework /

#### BOARD OF DIRECTORS

This is a collegial governance body in charge of strategic management of the Company and oversight of its executive bodies' activities.

Pursuant to the Charter, the Board consists of 13 directors. Members of the Board are elected at the Annual General Meeting of Shareholders for a period extending until the next Annual General Meeting of Shareholders.



For more details on directors, please see the Corporate Bodies section of this report

#### CHAIRMAN OF THE BOARD OF DIRECTORS

The Chairman is responsible for day-to-day operation of the Board of Directors, and convenes and chairs its meetings, makes arrangements for minute-taking and chairs the General Meetings of Shareholders.

For the last four years, the Board has been chaired by Gareth Peter Penny, an independent director.



For more details on the Chairman's biography, please see the Corporate Bodies section of this report

#### INDEPENDENT DIRECTORS

These are individuals having sufficient professional skills, experience and independence to act on their own and make impartial sound decisions that are not influenced by the Company's executive bodies, or particular groups of shareholders or other stakeholders

We adhere to international standards and recommendations set in the Corporate Governance Code endorsed by the Bank of Russia relating to the number of independent directors. As at 31 December 2016, five of our Board members (i.e. 38%) met the director's independence criteria as defined by the Moscow Exchange.

#### COMMITTEES OF THE BOARD OF DIRECTORS

These are ancillary bodies set up by the Board of Directors. Their function is to provide preliminary review of critical matters and advise the Board on relevant decisions.

The Board of Directors has set up four committees:

- Audit Committee;
- Strategy Committee;
- Budget Committee;
- Corporate Governance, Nomination and Remuneration Committee



For more details on the Committees, please see the Corporate Bodies section of this report

#### PRESIDENT

The President is the sole executive body in charge of day-to-day operations of the Company. The President acts as the Chair of the Management Board. The President is elected at the General Meeting of Shareholders for an indefinite period.

The President reports to the Board of Directors and the General Meeting of Shareholders. Since 2015, this position has been held by Vladimir Potanin (who in 2012–2015 was the CEO of the Company).



For more details on the President's biography, please see the Corporate Bodies section of this report

#### MANAGEMENT BOARD

This is a collegial executive body in charge of dayto-day management of the Company within its authority as set in the Charter and implementation of resolutions approved by the General Meeting of Shareholders and/or the Board of Directors.

Members of the Management Board are elected by the Board of Directors for an indefinite period. As at 31 December 2016, the Management Board consisted of 13 members.



For more details on the members of the Management Board, please see the Corporate Bodies section of this report

#### CORPORATE SECRETARY

This is a corporate officer whose duties include managing shareholder relations, making the necessary arrangements to protect their rights and interests, and providing efficient operating support to the Board of Directors. The Corporate Secretary reports to the Board of Directors.

Pursuant to the Charter, the Secretary is appointed by the Board of Directors for a three-year term.

Since 2011, this position has been held by Pavel Platov.



For more details on the Secretary's biography, please see the Corporate Bodies section of this report

#### **AUDIT COMMISSION**

The Audit Commission controls the Company's financial and business transactions.

It performs annual internal audits of the Company's operations (including validation of the data used in annual reports and accounting/financial statements), as well as other internal audits as it may see fit or as requested by the General Meeting of Shareholders, the Board of Directors or any shareholders owning at least 10% of the Company's stock.

Members of the Audit Commission are elected at the Annual General Meeting of Shareholders for a term extending to the next Annual General Meeting of Shareholders. Members of the Audit Commission shall not simultaneously serve on the Company's Board of Directors or hold other positions in the Company's corporate bodies.



For more details on the Audit Commission, please see the Risk Management Framework and Control Bodies section of this report

#### INDEPENDENT AUDITOR

This is a firm or an individual commissioned to audit accounting/financial statements of the Company and provide an independent opinion regarding their accuracy.

The auditor shall be approved by the annual General Meeting of Shareholders.

In 2016, the annual General Meeting of Shareholders has approved JSC KPMG as the Company's auditor for both IFRS and Russian accounting standards.



For more details on the independent audit, please see the Risk Management Framework and Control Bodies section of this report

# INTERNAL CONTROL AND RISK MANAGEMENT UNIT

This unit is in charge of improving the risk management and internal control framework, detecting and preventing any waste, misuse or misappropriation of funds or assets of the Company and its subsidiaries, wrongdoings and theft, as well as ensuring accuracy of metrics and measurement standards and combating illegal activities, such as money laundering and terrorism financing.



For more details on the Internal Control and Risk Management Unit, please see the Risk Management Framework and Control Bodies section of this report

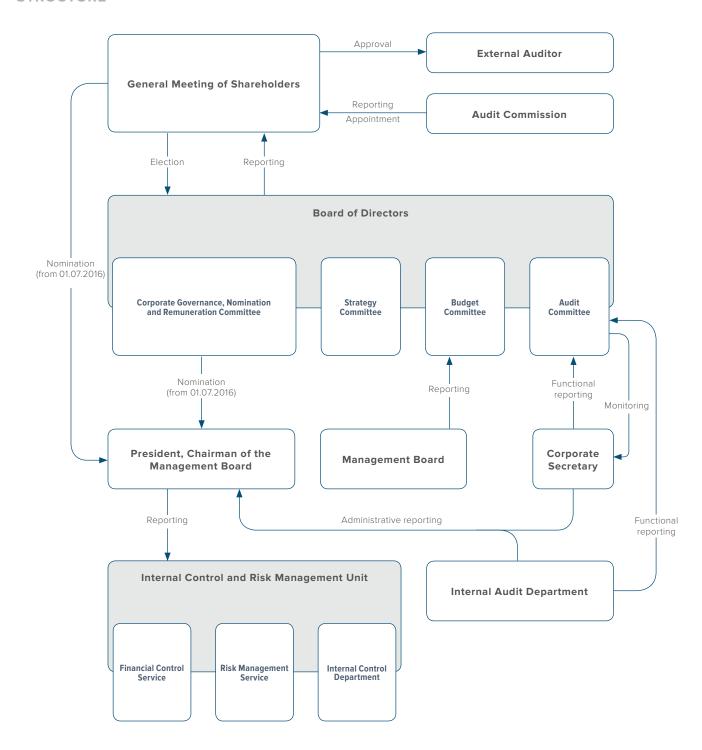
#### **INTERNAL AUDIT DEPARTMENT**

This department is in charge of independent audits, including assessment of the risk management and internal control framework of the Company and its subsidiaries.



For more details on the Internal Audit Department, please see the Risk Management Framework and Control Bodies section of this report

#### **STRUCTURE**



38%

met the director's independence criteria

13
directors

make up the Board, pursuant to the Charter 13
members

make up the Management Board

# Achieving excellence in corporate governance

#### CORPORATE GOVERNANCE ASSESSMENT

The Company has introduced annual performance assessments of the Board of Directors in 2014 in order to improve the corporate governance framework. All directors must fill out an online questionnaire following a schedule approved by the Board of Directors. The questionnaire contains 76 questions, divided into three parts and 15sections. All questions are graded on a scale from 1 (unsatisfactory) to 10 (excellent). For each question there is a text field where directors may enter additional comments. Answering all questions is mandatory.

Such evaluation of the Board of Directors helps us identify gaps, their root causes and opportunities for improvement.

In 2016, the Independent Directors Association, along with the Bank of Russia and Moscow Exchange, performed an independent evaluation of corporate governance matters in 65 top-tier companies listed on the Moscow Exchange. This evaluation relied on the Good Governance Index developed by the Institute of Directors (UK) and Cass Business School using three measurement elements. According to the resulting corporate governance index, the Company was ranked in the top 10 and scored 814 points (out of 1,000) based on questionnaires and 745 based on corporate governance metrics.

# ACHIEVING EXCELLENCE IN CORPORATE GOVERNANCE

The Company continuously improves its corporate governance framework to enhance efficiency and ensure compliance with global best practices. Since 2002, the Company has been following the recommendations of the Code of Corporate Conduct of the Federal Commission for the Securities Market, and after the Code of Corporate Governance had been approved on 21 March 2014 by the Board of Directors of the Bank of Russia, the main recommendations of the latter.

Our Corporate Governance Framework Improvement Programme was approved and adopted by the Corporate Governance, Nomination and Remuneration Committee of the Board of Directors in December 2013. In 2016, the Programme was enhanced with a set of initiatives aimed at improving performance of the Board and its committees.

Some of the key initiatives under our Corporate Governance Framework Improvement Programme for 2016 included:

- approving revised regulations for committees of the Board of Directors;
- inviting all stakeholders to participate in town-hall style meetings of corporate bodies;
- developing and implementing procedures for the disclosure of affiliations by Company's managers and directors;
- approving the Company's Internal Control Policy.

In 2017, the Company is planning to gradually implement the principles and procedures set out in the approved regulations in order to improve the performance of the Company's Board of Directors and its committees.

**814**/1,000

received be the Company according to the survey in research Good Governance Index

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# **CORPORATE BODIES**

### Board of Directors and its committees

#### **FUNCTIONS OF THE BOARD OF DIRECTORS**

Meetings of the Board of Directors (in person or in absentia) are held as and when required, but at least once every six weeks. The procedure for convening and holding meetings of the Board of Directors is specified in the Company's Regulation on the Board of Directors.

The Board of Directors sets the fundamental principles of business conduct and is responsible for nurturing our business and social culture.

The scope of powers of the Board of Directors includes:

- setting priority goals and defining Company's development strategy;
- approving the Company's Dividend Policy and providing recommendations on dividend per share;
- approving the internal control system and procedures, identifying key risks associated with the Company's operations, and implementing relevant risk management initiatives and procedures, appointing, electing and terminating powers of members of the Management Board, setting remuneration payable to the Company's President, members of the Management Board, Corporate Secretary, and Head of Internal Audit.
- acting on other matters as provided for by the Federal Law On Joint Stock Companies and the Company's Charter.

Pursuant to Regulation on the Board of Directors approved by the Annual General Meeting of Shareholders of MMC Norilsk Nickel held on 30 June 2009, the key responsibilities of the Chairman of the Board of Directors are as follows:

- ensuring high efficiency of the Board of Directors and its committees;
- convening the Board of Directors meetings and preparing their agendas;
- chairing the Board of Directors meetings or organising absentee voting;
- making arrangements for minutes to be taken at meetings of the Board of Directors and signing these minutes;
- preparing reports of the Board of Directors for the year to be included in the Company's Annual Report.

Since March 2013, the Board of Directors has been chaired by independent non-executive director Gareth Peter Penny. During the year the Board, under his leadership, approved several crucial resolutions dealing with the Company's growth strategy, long-term production planning, marketing and sales strategy, strategic health and safety issues, environmental projects and human capital development, and took steps to preserve the Company's competitive edge. Simultaneous participation of the Chairman of the Board of Directors in other companies' boards of directors did not affect his performance in respect of the Board of Directors of MMC Norilsk Nickel.

#### CHAIRMAN OF THE BOARD OF DIRECTORS

The Chairman of the Board of Directors is elected among the members of the Board of Directors by themselves by a majority vote from the total number of members of the Company's Board of Directors. The Board of Directors is entitled to elect a new Chairman of the Board of Directors at any time. When the Chairman of the Board of Directors is unavailable, the respective responsibilities are assumed by a member of the Board of Directors appointed by the Board of Directors.

The key goal of the Chairman of the Board of Directors is to ensure high levels of trust at Board meeting and constructive cooperation between the members of the Board and corporate management.

#### INDEPENDENT DIRECTORS

In accordance with global corporate governance practices and recommendations of the Corporate Governance Code, no less than one third of the Board of Directors should consist of independent directors. Moreover, the Company believes that independent directors are key to efficient operation of the Board of Directors and thoughtful decision-making.

All independent directors meet the independence criteria recommended by the Corporate Governance Code and requirements established by the current version of the Listing Rules of the Moscow Exchange, which state that an independent director is one who is not related to:

- the Company:
- any of the substantial shareholders of the Company;
- any of the substantial counterparties of the Company;
- any competitor of the Company;
- federal (Russian Federation or its constituent entities) and regional governments or municipal entities.

The Company sees independent directors as very valuable contributors to the efficiency of the Board, in particular, in terms of ensuring that the matters on the agenda of the Board are treated fairly, and reinforcing shareholders' and investors' confidence in actions taken by the Board of Directors.

Five (38%) out of 13 directors are independent.

#### DIRECTORS' LIABILITY INSURANCE

Since 2003, the Company has had its directors' liability insured. The insurance aims to cover potential damages arising from unintended erroneous actions of the Company's directors in their management activities.

Pursuant to the insurance agreement, premiums shall not exceed USD 1 mln. The terms and conditions of the agreement, as well as the amount of insurance coverage, are consistent with the world's best practices for such risks.

Pursuant to the insurance agreement, premiums shall not exceed



#### PERFORMANCE OF THE BOARD OF DIRECTORS

In 2016, there were 13 directors, including five independent directors, six non-executive directors, and two executive directors.

Years on the Board:

- <1 year Andrey Korobov, Rushan Bogaudinov</li>
- 1 to 3 years Gareth Peter Penny, Alexey Bashkirov, ••••••, Robert Edwards
- >3 years Andrey Bougrov, Sergey Barbashev, Marianna Zakharova, Stalbek Mishakov, Gerhardus Prinsloo, Maxim Sokov, Vladislav Soloviev.

On average, members of the Audit Committee of the Company's Board of Directors have more than 10 years of experience in finance.

#### Structure of the Board of Directors



Source: Company data

#### Breakdown by years served on the Board of Directors



Source: Company data

#### / Corporate bodies / Board of Directors and its committees

In 2016, we have successfully overcome the unfavourable market trends and once again have confirmed Norilsk Nickel's leadership in Russia and worldwide. Our production and financial results validate the long-term growth strategy chosen by the Company. Tight cooperation between the Board of Directors and the Company's management has unleashed true synergies. The Company, as well as its business partners, shareholders and the Russian government were beneficiaries of this synergistic effect coming from diversity and integration of a variety of experiences and points of view.

Throughout the year, the Board's attention was focused on the Company's strategies and priorities, oversight over executive bodies, corporate governance, nomination, remuneration and social responsibility matters. The Board of Directors made decisions and took appropriate measure to ensure that the Company adheres to the highest standards in health, safety and environment across all geographies.

Internal performance assessments of the Board of Director and its committees have been an inherent part of Company's operations since 2014. The relevant policy in effect requires all directors to fill out online questionnaires when prescribed by the Board of Directors.

Performance assessments help us identify corporate governance performance gaps, re-balance financial and management priorities, support growth, and ensure our leadership standing in the Russian economy going forward.

In 2016, the Board of Directors held 50 meetings, including:

- 7 meetings in person;
- 43 meetings in absentia.

#### Breakdown by industry experience



Source: Company data

#### Breakdown by age



Source: Company data

#### **Number of Board of Directors meetings**

V	1	Number		
Year	Total	In person	In absentia	of matters considered
2016	50	7	43	1,024
2015	47	9	38	864
2014	42	8	34	736

1,024
matters
have been considered

#### COMPOSITION OF THE BOARD OF DIRECTORS

There have been no changes in the composition of the Board of Directors following the Annual General Meeting of Shareholders held on 10 June 2016.

Directors' participation in meetings of the Board of Directors and its committees

Directors participation in meetings of the Board of Directors and its committees							
Full name	Title	Years on the Board of Directors	Number of meetings of the Board of Directors	Strategy Committee	Budget Committee	Audit Committee	Corporate Governance, Nomination and Remuneration Committee
				Participation / nur	mber of meetings		
Gareth Peter Penny	Chairman / Independent Director	3 years	50/50	8/8	-	-	-
Gerhardus Prinsloo	Independent Director / Chairman of the Audit Committee	4 years	50/50	8/8	7/7	10/10	3/8
Robert Edwards	Independent Director	3 years	50/50	-	-	10/10	8/8
	Independent Director / Chairman of the Corporate Governance, Nomination and Remuneration Committee	3 years	50/50	8/8	7/7	4/10	8/8
Andrey Korobov	Independent Director	1 year	50/50	-	-	-	-
Andrey Bougrov	Executive Director	14 years	50/50	-	-	-	_
Marianna Zakharova	Executive Director	6 years	50/50	-	-	-	-
Sergey Barbashev	Non-executive Director	5 years	50/50	-	7/7	-	8/8
Alexey Bashkirov	Non-executive Director / Chairman of the Budget Committee	3 years	50/50	8/8	7/7	10/10	-
Maxim Sokov	Non-executive Director / Chairman of the Strategy Committee	8 years	50/50	8/8	-	-	-
Vladislav Soloviev	Non-executive Director	6 years	50/50	-	3/7	-	-
Stalbek Mishakov	Non-executive Director	4 years	50/50	-	5/7	6/10	7/8
Rushan Bogaudinov	Non-executive Director	1 year	50/50	-	_	4/10	_

/ Corporate bodies / Board of Directors and its committees

#### **BIOGRAPHIES OF MEMBERS OF THE BOARD OF DIRECTORS**



Gareth Penny

Independent director

Chairman of the Board of Directors since

Member of the Strategy Committee

Born in: 1962 Nationality: UK

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Diocesan College (Bishop); Eton College (Cape Town); Oxford, Rhodes Scholar, Master of Arts in Philosophy, Politics and Economics

#### Track record:

2007–present: Director at Julius Bär Holding Ltd 2011–2012: CEO at AMG Mining

2012–2016: Executive Chairman at New World Resources plc, Executive Director at New World Resources NV 2012–2016: Director at OKD

2016—present: non-executive Chairman of the Board of Directors at Pangolin Diamonds Corp.



Andrey Bougrov

Executive director

Deputy Chairman of the Board of Directors since 2013 Member of the Management Board since 2013

Born in: 1952 Nationality: Russia

Share in the Company's authorised capital: 0%

Share in the common stock: 0%

#### Education:

 ${\tt Moscow\ State\ Institute\ of\ International\ Relations\ (MGIMO),\ PhD\ in\ Economics}$ 

#### Track record:

2002—present: member of the non-governmental Council on Foreign and Defence Policy

2006-present: member of the Management Board of the Russian Union of Industrialists and Entrepreneurs

2010–2013: member of the Management Board and Deputy CEO at Interros Holding Company

2011–2013: Chairman of the Board of Directors at MMC Norilsk Nickel

2013–2014: member of the Board of Directors of the Federal Hydro-Generating Company RusHydro

2013–present: Vice President at Interros Holding Company LLC (Interros Holding Company CJSC until 2015)

2013–2015: member of the Management Board, Deputy Chairman of the Board of Directors, and Deputy CEO at MMC Norilsk Nickel

2013—present: Vice President of the Russian Union of Industrialists and Entrepreneurs

2014—present: member of the Board of Directors at Inter RAO UES PJSC (Inter RAO UES OJSC until 2015)

2014—present: Deputy Head of the Russian President's Expert Council on Anti-Corruption

2015–present: member of the Management Board, Deputy Chairman of the Board of Directors at MMC Norilsk Nickel 2015–present: Member of the Investment Committee at the Federal Hydro-Generating Company RusHydro

2015-present: Senior Vice President at MMC Norilsk Nickel (formerly Vice President until 2016)

2016—present: member of the Expert Council on Corporate Governance at the Bank of Russia

2016—present: Chairman of the Issuer Committee at the Moscow Exchange



Sergey Barbashev

Non-executive director

Member of the Board of Directors since 2011 Member of the Corporate Governance, Nomination and Remuneration Committee

Born in: 1962 Nationality: Russia

Share in the Company's authorised

capital: 0.000088%

Share in the common stock: 0.000088%

#### Education:

Moscow Higher School of Militia of the Ministry of Internal Affairs of the USSR, degree in law

#### Track record:

2008–present: CEO and Chairman of the Management Board at Interros Holding Company LLC (Interros Holding Company CJSC until 2015)
2008–present: member of the Board at the Vladimir Potanin Charitable

at the Vladimir Potanin Charitable
Foundation
2011–present: Chairman of the Board

of Directors of Rosa Khutor Ski Resort Development Company

2015—present: branch director at Olderfrey Holdings Ltd.

2016–present: member of the Board of Endowment for Education, Science and Culture

2016—present: Director at Olderfrey Holdings Ltd.



#### Alexey Bashkirov

Non-executive director

Member of the Board of Directors since 2013
Chairman of the Budget Committee,
member of the Audit Committee, member of
the Strategy Committee

Born in: 1977 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Moscow State Institute of International Relations (MGIMO) of the Ministry of International Affairs of Russia, degree in international economics

#### Track record:

2009–2015: Executive Director, Head of the Investment Department, Deputy CEO for Investments at Interros Holding Company

2009–2013: member of the Board of Directors at Rosa Khutor Ski Resort Development Company 2009–2014: member of the Board of Directors at Prof-Media Management 2011–2015: member of the Management Board at Interros Holding Company 2012–2014: member of the Board of Directors at SP Holding, Cinema Park 2014–present: member of the Board of Directors at Petrowax Pharm, Zaodno 2015–present: member of the Management Board, Deputy CEO

2016—present: Trustee of the Night Time Hockey League, a non-profit amateur hockey foundation

for Investments at Interros Holding



#### Rushan Bogaudinov

Non-executive director

Member of the Board of Directors since 2015

Born in: 1977 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Moscow Stankin State Technology University, degree in machine building automation

#### Track record:

2011–2012: Head of the Internal Audit
Department at Rospechat Agency
2011–2012: Head of the Internal Audit
Department at FreightLink
2012–2015: Head of the Control and
Audit Department at RUSAL Global
Management B. V.
2012–2016: member of the Board of
Directors at Aughinish Alumina Ltd
2012–2016: member of the Board of
Directors at Limerick Alumina Refining
Ltd
2015–present: Function Head at RUSAL

Global Management B. V.



#### / Corporate bodies / Board of Directors and its committees



#### Marianna Zakharova

Executive director

Member of the Board of Directors
since 2010

Born in: 1976 Nationality: Russia Share in the Company's authorised capital: 0% Share in the common stock: 0%

#### Education:

Peoples' Friendship University of Russia (RUDN), master's degree

2010-2015: member of the

#### Track record:

Management Board, Deputy CEO for Legal Affairs at Interros Holding Company 2010–2015: member of the Board of Directors at ProfEstate 2015–present: First Vice President for Corporate Governance, Asset Management and Legal Affairs at MMC Norilsk Nickel 2016–present: member of the Management Board at MMC Norilsk Nickel



Andrey Korobov

Independent director Member of the Board of Directors since 2015

Born in: 1969 Nationality: Russia Share in the Company's authorised capital: 0% Share in the common stock: 0%

#### Education:

St. Petersburg State Electrotechnical University; Northwest Academy of Public Service, degree in finance and credit

#### Track record:

2008–2013: CEO at Dighton Capital Management (Switzerland)
2012–2015: Deputy CEO at Russian Technologies (State Corporation for Promotion of Development, Production and Export of High Technology Industrial Products)
2013–2015: CEO at RT–Global Resources
2013–2015: member of the Board of Directors at TriArc Mining
2014–2016: member of the Board of Directors at Baikal Mining Company 2015–2016: CEO at RT–Business Development



Stalbek Mishakov

Audit Committee

Non-executive director
Member of the Board of Directors
since 2012
Member of the Corporate
Governance, Nomination and
Remuneration Committee and the

Born in: 1970
Nationality: Russia
Share in the Company's
authorised capital: 0%
Share in the common stock: 0%

#### Education:

Moscow State Institute of International Relations (MGIMO), degree in international law University of Notre Dame, Master's degree Diplomatic Academy of the Russian

Foreign Ministry, PhD in Economics

#### Track record:

2010–present: Advisor to the CEO at RUSAL Global Management B. V. 2013–present: Deputy CEO at EN+Management 2013–present: member of the Board of Directors at United Company RUSAL plc



#### Gerhardus Prinsloo

Independent director
Member of the Board of Directors
since 2012
Chairman of the Audit Committee

Born in: 1965
Nationality: Germany
Share in the Company's
authorised capital: 0%
Share in the common stock: 0%

#### Education:

University of Pretoria, South Africa

#### Track record:

2008–2012: Partner, Director at Bain & Company Russia LLC 2012–present: CEO of Natural Resource Partnership



Maxim Sokov

Non-executive director

 $\label{eq:member of the Board of Directors since} \\$ 

2008

Chairman of the Strategy Committee

Born in: 1979 Nationality: Russia

Share in the Company's authorised

capital: 0.0011%

**Share in the common stock:** 0.0011% On 20 January 2016, acquired 1,753 registered common non-documentary

shares in MMC Norilsk Nickel

#### Education:

Russian State Tax Academy under the Russian Ministry of Taxes, degree in law; New York University, master's degree in law.

#### Track record:

2008-2013: CEO at OK RUSAL -Investment Management 2011-2012: Director for Strategy at RUSAL Global Management B. V. 2012-present: member of the Board of Directors at United Company RUSAL plc 2012-2013: Director for Strategic Investment Management at RUSAL Global Management B. V. 2013-2014: Advisor on Strategic Investment Management at RUSAL Global Management B. V. and First Deputy CEO at En+ Group Ltd 2013-present: CEO at En+ Management. member of the Board of Directors at Eurosib Energo Plc and En+ Group Ltd 2014-present: CEO at En+ Group Ltd



Vladislav Soloviev

Non-executive director

Member of the Board of Directors since

Born in: 1973 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Graduate School of Management of the State Academy of Management Moscow Stankin State Technology University MBA

#### Track record:

2010–2014: First Deputy Director of the Branch at RUSAL Global Management R V

2014-present: CEO at RUSAL Global Management B. V.



Robert Edwards

Independent director

Member of the Board of Directors since

2013

Member of the Corporate Governance, Nomination and Remuneration

Committee, member of the Audit

Committee

Born in: 1966 Nationality: UK

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Camborne School of Mines, degree in Mining Engineering

#### Track record:

2012–2012: Chairman of Global Metals and Mining Research at Renaissance

2013–2014: Senior Advisor at Royal Bank

of Canada (Europe) Capital Markets 2013–present: CEO at Highcross

Resources Ltd

2014-present: Director at GB Minerals

Ltd

2016–2016: Non-executive Chairman at

Sierra Rutile Limited (SRX)

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/ Corporate bodies / Board of Directors and its committees

#### COMMITTEES OF THE BOARD OF DIRECTORS

Committees established by the Board of Directors are in charge of review of the most important matters and preparation of recommendations to the Board of Directors.

To ensure efficiency and proper fulfilment of their functions, the committees may discuss matters with the Company's management bodies and seek opinions of external consultants.

#### **Audit Committee**

The Audit Committee deals with matters related to accounting and financial statements, internal and external audits, prevention of wrongdoings by employees and third parties, as well as matters related to the environment and health and safety.

In the reporting year, the Committee held 10 meetings, including four in person and three in absentia, as well as thee joint meetings (a joint meeting of the Audit and Strategy Committees on 26 May 2016, and two joint Meetings of the Audit and Strategy Committees on 11 March 2016 and 26 August 2016).

Three of the five members of the Audit Committee, including its Chairman, are independent directors. No executive directors are members of the Audit Committee

The Audit Committee plays an important role when it comes to controls and accountability and has become an effective interface between the Board of Directors, the Audit Commission, external auditor, the Internal Audit Department and management of the Company.

During the reporting year, the Audit Committee has developed for the Board of Directors a number of recommendations dealing with the accuracy, completeness and validity of the Company's financials, health, safety and environment, accounting for metal bearing products, approval of the Company's auditors, and approval of the Regulation on the Internal Audit Department. The Audit Committee also considered and took note of the results achieved in identifying, assessing and managing technical and production risks across Norilsk Nickel Group's operations and assets, and results of audits conducted by the Internal Audit Department.

#### Members of the Audit Committee

Before 20 June 2016	After 20 June 2016
Gerhardus Prinsloo, Chairman, independent director	Gerhardus Prinsloo, Chairman, independent director
Robert Edwards, independent director	Robert Edwards, independent director
Alexey Bashkirov	Alexey Bashkirov
Stalbek Mishakov	
	Rushan Bogaudinov <sup>1</sup>
	••••••, independent director

#### Plans for 2017

In 2017, the Audit Committee will carry on with an emphasis on independence and impartiality of both internal and external audits, as well as efficiency and validity of the risk management system.

#### Strategy Committee

The Strategy Committee was established to support the Board of Directors by conducting preliminary reviews of the matters pertaining to sustainable business development, investment planning, business restructuring, and interaction with capital markets and government authorities.

Throughout the year, the Committee held eight meeting, including five meetings in person, one in absentia and two joint meetings (one with the Strategy Committee on 26 May 2016, and the other with the Corporate Management, Nomination and Remuneration Committee on 27 April 2016).

The Strategy Committee is made up of five directors, including three independent directors. All directors are non-executive.

#### Members of the Strategy Committee

Mambars of the Strategy Committee in 2016?		
Members of the Strategy Committee in 2016 <sup>2</sup>		
Maxim Sokov, Chairman		
Gerhardus Prinsloo, independent director		
Alexey Bashkirov		
Gareth Peter Penny, independent director		
•••••, independent director		

Joined the Committee as per the Board of Directors' resolution of 20 June 2016 (Minutes No. GMK/22-pr-sd)

<sup>&</sup>lt;sup>2</sup> In 2016, there were no changes to the Committee's composition.

The Strategy Committee's focus is on supporting the Board of Directors in developing, implementing and revising the corporate strategy and preparing recommended updates thereto. During the year, the Strategy Committee issued recommendations to the Board of Directors to facilitate decision-making on updating the Company's development strategy and approving its function-specific strategies (sales, marketing, environment, transport and logistics, health and safety, fuel and energy). The Committee also revised the list of non-core assets and reviewed reports on their sales and implementation of the corporate procurement policy. For strategic planning purposes, the Committee reviewed the long-term reserve base development plans, production reports and deliverables of a programme designed to improve production efficiency and reduce operating costs of the Company on a quarterly basis.

#### **Budget Committee**

The Budget Committee is in charge of preliminary review and development of recommendations pertaining to finance, budgeting, business plans and monitoring of their implementation.

During the reporting year, the Budget Committee held a total of seven meetings, including one meeting in person, four meetings in absentia, and two joint meetings (with the Audit Committee on 11 March and 26 August 2016).

The Budget Committee is made up of five directors, including two independent directors. All directors are non-executive.

The key role of the Budget Committee throughout the year was to issue recommendations to the Board of Directors in order to facilitate decision-making on the amount of dividends and the record date to be suggested by the Board of Directors. The Budget Committee also considered key terms related to the renewal of the corporate insurance policies and noted the relevant management efforts. The Committee approved the Company's 2017 budget and recommended the continuation of the capital expenditure reduction initiatives

#### **Members of the Budget Committee**

Before 20 June 2016	After 20 June 2016			
Alexey Bashkirov, Chairman	Alexey Bashkirov, Chairman			
Sergey Barbashev	Sergey Barbashev			
••••••, independent director •••••, independent director Gerhardus				
Prinsloo, independent director Gerhardus Prinsloo, independent director				
Vladislav Soloviev	Stalbek Mishakov <sup>1</sup>			

#### **Corporate Governance, Nomination** and Remuneration Committee

The Corporate Governance, Nomination and Remuneration Committee supports the Board of Directors by way of:

- assessing, controlling and improving the Company's corporate governance framework;
- ensuring succession planning for the Board of Directors and the Management Board of the Company:
- providing incentives, assessing the performance of the Company's Board of Directors, Management Board, President and Corporate Secretary, and setting applicable remuneration policies;
- supervising the development and implementation of the Company's information policy.

Throughout the year, the Committee held seven meetings, including four meetings in person, two meetings in absentia, and one joint meeting (on 27 April 2016, with the Strategy Committee).

The Committee is made up of five directors, including three independent directors, one of whom chairs the Committee. All directors are nonexecutive.

#### Members of the Corporate Governance, Nomination and Remuneration Committee

Before 20 June 2016	After 20 June 2016		
Chairman, independent director	director Chairman, independent		
Sergey Barbashev	Sergey Barbashev		
Stalbek Mishakov	Stalbek Mishakov		
Robert Edwards, independent director	Robert Edwards, independent director		
	Gerhardus Prinsloo <sup>1</sup> , independent director		

Joined the Committee as per the Board of Directors' resolution of 20 June 2016 (Minutes No. GMK/22-pr-sd).

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/ Corporate bodies / Board of Directors and its committees

The Committee issued recommendations to the Board of Directors in order to facilitate decision-making on the convocation, preparation and running of annual and extraordinary general meetings of shareholders, and on the matters reserved to such meetings (remuneration and reimbursement of expenses of the members of the Board of Directors and the Audit Commission, liability insurance and indemnification of the members of the Board of Directors and the Management Board).

Additionally, the Corporate Governance, Nomination and Remuneration Committee approved the revised regulations on several committees of the Board of Directors, advised the Board of Directors on evaluation of directors' performance in 2016, and reviewed the Company's management updates on implementation of the Our Home and My Home programmes, as well as the medium-term chartable policy of the Company.



## Pavel Platov

Corporate Secretary since 2011

Born in: 1975 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Dobrolyubov Linguistics University of Nizhny Novgorod, Russian Presidential Academy of National Economy and Public Administration

#### Track record:

2011–present – Corporate Secretary at MMC Norilsk Nickel (formerly, until 2015, JSC Norilsk Nickel)

#### CORPORATE SECRETARY

The mission of the Corporate Secretary is to ensure implementation and enforcement of all protections and remedies that our shareholders my enjoy under the law or internal regulations.

Pursuant to the Company's Charter, the Corporate Secretary is elected by the Board of Directors for a three-year term. The Board of Directors may dismiss the Corporate Secretary early.

The Corporate Secretary is responsible for:

- making arrangements for General Meetings of Shareholders as provided for by the applicable laws of the Russian Federation, Company's Charter, and by-laws;
- making arrangements for Meetings of the Board of Directors and its committees as provided for by the applicable laws of the Russian Federation, Company's Charter, and by-laws;
- providing ongoing support and assistance to the Board of Directors, its committees, and members;
- contributing to improvements to the corporate governance framework and its implementation;
- managing Company's interactions with shareholders and preventing corporate conflicts.

In accordance with the Regulation on the Corporate Secretary of Norilsk Nickel (Minutes of a BD meeting No. GMK/14-pr-sd of 20 April 2015), the Corporate Secretary reports to the President and is accountable to the Board of Directors.

At this time, the Corporate Secretary is Mr. Pavel Platov.

## President and Management Board

The President and the Management Board are executive bodies in charge of day-to-day operations. The President serves as the Chairman of the Management Board.

The executive bodies are a key element the Company's management system that ensures implementation of resolutions of the Board of Directors and General Meetings of Shareholders, as well as core corporate plans and programmes, and maintains the efficiency or risk management and internal control functions.

The President and members of the Management Board are elected for life. The Board of Directors may dismiss any member of the Management Board at any time. Since 01 July 2016, the General Meeting of Shareholders has the authority over election and termination of the President

#### **MANAGEMENT BOARD ACTIVITIES IN 2016**

Participation in Management Board meetings in 2016

Vladimir Potanin	38
Elena Bezdenezhnykh	35
Sergey Batekhin	38
Larisa Zelkova	37
Nina Plastinina	38
Alexander Ryumin	37
Sergey Malyshev	38

Onik Aznauryan	38
Andrey Bougrov	38
Sergey Dyachenko	38
Vladislav Gasumyanov	38
Elena Kondratova	38
Marianna Zakharova <sup>1</sup>	24
Pavel Fedorov <sup>2</sup>	11

meetings held the Management Board in 2016

#### **RESPONSIBILITIES** OF THE PRESIDENT:

Acting on behalf of the Company without the power of attorney on the following issues, inter alias:

- representing Company's interests;
- executing transactions;
- approving Company's staffing;
- issuing orders and instructions that are binding on all employees of the Company;
- approving Company's internal documents dealing with such issues as production, technology, finance, accounting, business, human resources, social support, health, safety and document control;
- making decisions on any other issues relating to day-to-day operations which, pursuant to the Company's Charter, are not within the scope of powers of the General Meeting of Shareholders, the Board of Directors or the Management Board.

#### **RESPONSIBILITIES** OF THE MANAGEMENT BOARD:

- conducting preliminary reviews of materials prepared for meetings of the Board of Directors regarding such issues as determination of priorities for the Company's operations, concepts and strategies and approval of plans and budgets;
- preparing proposals for amendments to the Company's Charter;
- preparing proposals related to transactions that require approval by the General Meeting of Shareholders or the Board of Directors;
- analysing and evaluating financial and business performance of the Company;
- drafting proposals for application of the Company's reserve fund;
- Acting on other matters as stipulated in the Company's Charter.

Joined the Management Board as per the Board of Directors' resolution of 27 April 2016 (Minutes No. GMK/15-pr-sd)

<sup>&</sup>lt;sup>2</sup> Left the Management Board as per the Board of Directors' resolution of 27 April 2016 (Minutes No. GMK/15-pr-sd).

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/ Corporate bodies / President and Management Board

#### **BIOGRAPHIES OF MEMBERS OF THE MANAGEMENT BOARD**



#### Vladimir Potanin

Company's President since 2015 Chairman of the Management Board since 2012

Born in: 1961
Nationality: Russia

Share in the Company's authorised capital: 0%

Share in the common stock: 0%

#### Education

Moscow State Institute of International Relations (MGIMO), degree in international economics

#### Track record:

1995–present – Member of the Presidium of the International Foundation for the Unity of Orthodox Christian Nations.
2000–present – Member of the Bureau and Management Board of the Russian Union of Industrialists and Entrepreneurs
2001–present – Member of the Board of Trustees of the Solomon R. Guggenheim Foundation (New York).
2003–present – Chairman of the Board of Trustees of the State Hermitage Museum.

2004—present — Chairman of the the National Council on Corporate Governance

2005—present — Member of the Council of Trustees and the Board of the Russian Olympians Foundation

2006-present – Deputy Chairman of the Board of Trustees of the Moscow State Institute of International Relations (MGIMO), member of the Board of Trustees of the Graduate School of Management (St Petersburg University), and member of the Bureau of the All-Russian Association of Employers (Russian Union of Industrialists and Entrepreneurs)

2007–2012 – Member of the Presidium of the Russian President's Council for the Development of Physical Culture and Sports, High-Achievement Sports, Preparation and Staging of the XXII Winter Olympic Games and XI Paralympic Games in Sochi in 2014

2007–present – Member of the Board of Trustees of St Petersburg State University and member of the Board of Trustees of the MGIMO Endowment Fund 2007–2014 – Member of the Supervisory Board of the Sochi 2014 Steering Committee 2008–2012 – Member of the Russian Government's Competition and Entrepreneurship Council 2008–present – Member of the Board at Vladimir Potanin Charitable Foundation

2009–2016 – Chairman of the Supervisory Board at the Russian International Olympic University

2009—present – Deputy Chairman of the Supervisory Board at the Russian International Olympic University 2009—present

2010 – present – Member of the Board of Trustees, Russian Geographical Society.

2011—present — Member of the Board of Trustees of the State Hermitage Museum Endowment Fund, and the Moscow Church Construction Foundation

2012–2015 – CEO and Chairman of the Management Board of MMC Norilsk Nickel

2013-2014 – Member of the Board of Directors of Inter RAO UES 2013–2015 – President of INTERROS Holding Company 2014–present – Chairman of the Board of Trustees of the ROZA Club for Sport Development and Support 2015–present – President of INTERROS Holding Company

2016–present – Member of the Board of the Endowment for Education, Science and Culture, and the Chairman of the Board of Trustee of the Night Hockey Foundation for the Development of Amateur Hockey



Sergey Dyachenko

Member of the Management Board since 2013

Born in: 1962 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Plekhanov Leningrad Mining Institute, degree in Mining Engineering University of Pretoria (South Africa), master's degree

#### Track record:

2013–2014 – Deputy CEO and Head of Operations at MMC Norilsk Nickel 2014–2015 – First Deputy CEO and COO at MMC Norilsk Nickel 2015–present – First Vice President and COO at MMC Norilsk Nickel 2016–present – Member of the Board at the Non-profit Russian Mining Council Partnership

2010-2013 - COO at Kazakhmys Group



Marianna Zakharova

**Executive Director** 

Member of the Board of Directors since

2010

Member of the Management Board since

2016

Born in: 1976 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Peoples' Friendship University of Russia (RUDN), master's degree in law

#### Track record:

2010–2015 – Member of the Management Board, Deputy CEO for Legal Affairs at Interros Holding Company

2010–2015 – Member of the Board of Directors at ProfEstate

2015–present – First Vice President for Corporate Governance, Shareholdings and Legal Affairs at MMC Norilsk Nickel 2016–present – Member of the Management Board of MMC Norilsk Nickel.



Onik Aznauryan

Member of the Management Board since 2013

Born in: 1970 Nationality:

Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Yerevan State Polytechnic University; University of Pittsburgh (USA), Master of Business Administration

#### Track record:

2009–2012 – Deputy CEO at Rosgorstrakh Insurance, member of the Management Board and Head of the President's Office of Rosgorstrakh 2011–2012 – CEO at Severny Port 2012 – CEO at Energostroyinvest– Holding

2013 – Member of the Board of Directors at Norilskgazprom

2013 – Chairman of the Board of Directors at Norilskgazprom 2013–2015 – Deputy CEO for Non-Industrial Assets and Energy at MMC Norilsk Nickel and Head (on a part-time basis) of Norilskenergo, branch of MMC Norilsk Nickel

2015–present – Senior Vice President, Head of Non-Industrial Assets and Energy at MMC Norilsk Nickel(Vice-President until 2016), and Head (on a part-time basis) of Norilskenergo, branch of MMC Norilsk Nickel

#### / Corporate bodies / President and Management Board



Sergey Batekhin

Member of the Management Board since 2013

Born in: 1965 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Krasnoznamenny Military Institute of the USSR Ministry of Defence, army linguist; Plekhanov Russian Academy of Economics, degree in Finance and

Moscow International Higher Business School (MIRBIS), Master of Business Administration

#### Track record:

2009–2015 – Member of the Board of Directors of the Continental Hockey League

2012–2015 – Chairman of the Board of Directors at Interport Management Company

2013–2015 – Member of the
Management Board, Deputy CEO,
Head of Sales, Commerce and Logistics
at MMC Norilsk Nickel, and member
of the Board of Directors at Metal
Trade Overseas SA and Norilsk Nickel
Marketing (Shanghai) Co., Ltd
2013–2014 – Member of the Board of
Directors, Chairman of the Board of
Directors at Yenisey River Shipping
Company and member of the Board of
Directors at Norilsk Nickel (Asia) Ltd
2015–present – Senior Vice President –
Sales, Commerce and Logistics at MMC
Norilsk Nickel (Vice-President until 2016)



#### Andrey Bougrov

**Executive Director** 

Deputy Chairman of the Board of Directors since 2013 Member of the Management Board since 2013

Born in: 1952 Nationality: Russia

Share in the Company's authorised capital: 0%

Share in the common stock: 0%

#### **Education:**

 ${\tt Moscow\ State\ Institute\ of\ International\ Relations\ (MGIMO),\ PhD}$  in Economics

#### Track record:

2002—present — Member of the Public Council on Foreign and Defence Policy

2006-present - Member of the Management Board of the Russian Union of Industrialists and Entrepreneurs

2010-2013 – Member of the Board and Deputy CEO at Interros Holding Company

2011–2013 — Chairman of the Board of Directors at MMC Norilsk Nickel

2013–2014 – Member of the Board of Directors of the RusHydro Federal Hydro-Generating Company

2013—present – Vice President at Interros Holding Company LLC (Interros Holding Company CJSC until 2015)

2013–2015 – Member of the Management Board, Deputy Chairman of the Board of Directors, Deputy CEO at MMC Norilsk Nickel

2013—present – Vice President of the Russian Union of Industrialists and Entrepreneurs

2014—present – Member of the Board of Directors at Inter RAO UES (Inter RAO UES OJSC until 2015)

2014—present — Member of the Expert Committee of the Russian President's Anticorruption Office

2015-present – Member of the Management Committee, Deputy Chairman of the Board of Directors of MMC Norilsk Nickel

2015–present – Member of the Investment Committee at RusHydro Federal Hydroelectric Generating Company 2015–present – Senior Vice-President at MMC Norilsk Nickel (Vice-President until 2016)

2016—present – Member of the Board of Experts on Corporate Governance at the Bank of Russia

2016-present - Chairman of the Issuer Committee at Moscow Stock Exchange



Sergey Malyshev

Member of the Management Board since 2013

Born in: 1969 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Finance Academy under the Government of the Russian Federation, degree in Finance and Credit; Russian Presidential Academy of National Economy and Public Administration, degree in Public and Municipal Administration; Moscow State Textile Academy, degree in Mechanical Engineering

#### Track record:

1998–2009 – Deputy General Director for Economy and Finance of CJSC LUKOIL-Neftekhim, managing company of Russian and foreign.
2009–2013 – Deputy CEO for Economics and Finance, First Deputy CEO at Energostroyinvest-Holding 2013–2015 – Deputy CEO, Head of Economy and Finance Unit of OJSC MMC Norilsk Nickel.
2015–2016 – Deputy CEO and Chief Financial Officer at MMC Norilsk Nickel.

and CFO at MMC Norilsk Nickel



Larisa Zelkova

Member of the Management Board since 2013

Born in: 1969 Nationality: Russia

Share in the Company's authorised capital: 0%

Share in the common stock: 0%

#### Education:

Moscow State University, degree in Journalism

#### Track record:

1998–2013 – Deputy CEO and PR Director at Interros Holding Company

1999–2014 – CEO of the Vladimir Potanin Charitable Foundation 2007-present - member of the Presidium of the MGIMO **Endowment Fund** 

2009-present - Member of the Board of Trustees at Parvlovsk Gymnasium Private Non-Profit School

2010–2013 – member of the Management Board at Interros Holding Company

2011–2013 – Chair of the Board of Directors at Prof-Media Management, member of the Board of Directors at MMC Norilsk Nickel

2011-present - member of the Board of Directors at Rosa Khutor  ${\bf Ski\ Resort\ Development\ Company,\ Chair\ of\ the\ Management}$ Board at the State Hermitage Museum Endowment Fund 2011–2016 – Chair of the Supervisory Board at the Russian International Olympic University.

2013-2014 - member of the Board of Directors at Prof-Media Management

2013–2015 – member of the Management Board and Deputy CEO for Social Policy and Public Relations at MMC Norilsk Nickel 2014-present - President, Chair of the Board at the Vladimir Potanin Charitable Foundation

2015-present - member of the Board of Trustees at The Hermitage Foundation UK and member of the Board of Trustees at the Russian Federal Public Academy of Education 2015–2016 – Vice President for HR, Social Policy and Public Relations at MMC Norilsk Nickel

2016-present - member of the Board of Trustees at the Endowment Fund for Education and Culture and Senior Vice President for HR, Social Policy and Public Relations at MMC Norilsk Nickel



Elena Bezdenezhnykh

Member of the Management Board since 2012

**Born in: 1973** Nationality: Russia

Share in the Company's authorised

capital: 0.001%

Share in the common stock: 0.001%

#### Education:

Krasnoyarsk State University, degree in Law

#### Track record:

2008–2012 – Director of the Legal Department at MMC Norilsk Nickel and Head (on a part-time basis) of the Legal Department at RAO Norilsk Nickel 2009-2012 - Member of the Board of Directors at RAO Norilsk Nickel 2011–2013 – Member of the Board of Directors t the Sport Projects Management Company

2012-2013 - Chair of the Board of Norilsk Nickel Non-State Pension Fund and Chair of the Board of Directors of RAO Norilsk

2012-2015 - Deputy CEO and head of Corporate Governance, Asset Management and Legal Affairs at MMC Norilsk Nickel

2015 - Vice President for Corporate Governance, Asset Management and Legal Affairs at MMC Norilsk Nickel 2015-present - Vice President/Executive Secretary, Head of Government Relations at MMC Norilsk Nickel 2016-present - Member of the Supervisory Board at the Siberian Federal University (independent public college)



#### **Vladislav** Gasumyanov

Member of the Management Board since 2014

Born in: 1959 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Kiev Civil Aviation Engineering Institute; North-West Academy of Public Administration

#### Track record:

2009-2012 - Deputy Head of the Russian President's Office for Interregional and Cultural Relations with Foreign States

2012–2015 – Director of Corporate Security and Head of Security at MMC Norilsk Nickel

2014-2015 - Member of the Management Board at MMC Norilsk Nickel

2014-2016 – Member of the Board of Directors at Yenisey River Shipping Company

2015 - Vice President, Director of Corporate Security and Head of Security at MMC Norilsk Nickel 2015-present - Vice President and Head of Corporate Security at MMC

Norilsk Nickel

#### / Corporate bodies / President and Management Board



Elena Kondratova

Member of the Management Board since 2014

Born in: 1972 Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Moscow Pedagogical State University, degree in Psychology

#### Track record:

2009-2013 – Head of the President's Office at Interros Holding Company 2013–2015 – Chief of Staff at MMC Norilsk Nickel, Aide to the President of Interros Holding Company (on a parttime basis)

2014–2015 – member of the Management Board at MMC Norilsk Nickel

2015 – Chief of Staff at MMC Norilsk Nickel

2015-present – member of the Management Board, Vice President and Chief of Staff at MMC Norilsk Nickel, and Aide to the President of Interros Holding Company (on a part-time basis)



Nina Plastinina

Member of the Management Board since 2013

Born in: 1961
Nationality: Russia

Share in the Company's authorised

capital: 0%

Share in the common stock: 0%

#### Education:

Moscow Chemical Machinery Construction Institute, degree in Mechanical Engineering; Bauman Moscow Technical Institute, post-graduate degree in Economics and Production Management

#### Track record:

2008–2013 – Director of Financial Department at Interros Holding Company

2013–2015 – Director of Internal Control Department at MMC Norilsk Nickel 2015–present – Vice-President for Internal Audit and Vice-President for Internal Controls and Risk Management at MMC Norilsk Nickel



Alexander Ryumin

Member of the Management Board since 2013

Born in: 1956 Nationality: Russia

Share in the Company's authorised

capital: 0.003%

Share in the common stock: 0.003%

#### Education:

Kirov Urals Polytechnic Institute, degree in Metallurgical Engineering

#### Track record:

2008–2012 – Director of Production Management Department at MMC Norilsk Nickel 2012-2015 – CEO of Polar Division at MMC Norilsk Nickel

2015-present – Vice-President,CEO of Polar Division at MMC Norilsk Nickel



On 27 April 2016, the MMC Norilsk Nickel's Board of Directors approved members of the Company's Management Board who continued their work in 2016.

During the reporting year, there have been no transactions with Members of the Management Board involving Company's stock.

#### **KEY PERFORMANCE INDICATORS (KPIS)**

The KPIs adopted by the Company serve to build a transparent incentive and performance assessment system.

The Company's KPIs embrace achievements in corporate social responsibility, safety, operating efficiency, capital management and organisational development at production sites.

Norilsk Nickel's Implementation Plan for the Employee Performance Management System approved by a CEO order involves:

- review and approval of documents governing employee performance assessment procedures;
- approval of individual KPIs;
- preparation of individual development plans;
- assessment of performance by team and individual KPIs.

To improve the performance of the Head Office employees, the CEO issued an order approving the Procedure for Assessing Employee Performance and the Regulation on Annual Performance Bonuses for Head Office Employees. The Procedure primarily aims to establish a link between the results of performance assessment and remuneration, development, and promotion of employees, whereas the Regulation is used to assess employee performance in the reporting period based on team and individual KPIs.

To boost employee performance across its Russian subsidiaries, the Company has developed the Procedure for Assessing Performance of the Group's Management. The Procedure prescribes that management performance be managed by establishing KPIs and assessing achievement thereof.

#### MANAGEMENT REMUNERATION SYSTEM

Balance of interests is the key principle behind the remuneration of the Board of Directors and Management Board members.

The remuneration paid to the directors is determined by the General Meeting of Shareholders and includes:

- base remuneration paid to the BD members;
- additional remuneration paid to the committee members and chairs;
- reimbursement of expenses incurred by the directors in discharge of their duties.

Subject to a special resolution adopted by the General Meeting of Shareholders, the Chairman of the Board of Directors may be entitled to additional remuneration and benefits.

To clearly differentiate the principles and structure of remuneration payable to non-executive and executive directors, the following items are excluded from the remuneration payable to non-executive directors:

- bonuses linked to the Company's operating results;
- stock options;
- additional benefits, including all forms of insurance other than directors' liability insurance;
- severance pay and any payments related to change of ownership;
- pension plans and schemes.

As an additional benefit, the directors are entitled to certain insurance protections, such as:

- liability insurance;
- reimbursement of losses incurred due to the election to the Board of Directors.

The total remuneration payable to the President and members of the Management Board consists of the base salary set forth in their employment contracts approved by the Board of Directors, and bonuses. Bonuses are linked to the Company's performance, including both financial metrics (EBITDA, free cash flow) and non-financial indicators (lower workplace injury rates, stakeholder involvement, etc.).

During the year, members of the Management Board received bonuses based on their annual performance and achievement of relevant KPIs.

The total remuneration paid out to the corporate governance bodies in 2016 (including salaries, bonuses, commissions, benefits and/or reimbursement of expenses, as well as any other remuneration in kind) was RUB 3,533,398,000 (USD 52,709,828)<sup>1</sup>.

RUB **3,533** mln

The total remuneration paid out to the corporate governance bodies in 2016

<sup>&</sup>lt;sup>1</sup> The total amount of estimated fees to corporate governance bodies in 2016 according to IFRS statement: amounted to RUR 4.1 bn (USD 62 mln)...

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/ Corporate bodies / Management remuneration system

#### **Board of Directors remuneration in 2016**

Remuneration types	thousand RUB	USD
Remuneration for membership in a governance body	250,735	3,740,365
Salary	0	0
Bonus	0	0
Commissions	0	0
Benefits	0	0
Reimbursement	1,621	24,181
Other types of remuneration	0	0
Total	252,356	3,764,547

#### Management Board remuneration in 2016

Remuneration types	thousand RUB	USD
Remuneration for membership in a governance body	3,330	49,676
Salary	1,949,891	29,087,699
Bonus	1,327,821	19,807,906
Commissions	0	0
Benefits	0	0
Reimbursement	0	0
Other types of consideration	0	0
Total	3,281,042	48,945,281

## RISK MANAGEMENT AND CONTROL BODIES

## Risk management framework

Company's operations are associated with inherent risks that may unfavourably affect its strategic and operational goals, including financial results. To ensure that all risks are managed in an efficient way, we have implemented and keep improving our corporate risk management framework (CRMF).

The CRMF is at the core of our corporate governance system and was designed in accordance with Russian and international laws, including the Corporate Governance Code recommended by the Bank of Russia, and Russian and international professional risk management standards, including ISO 31000 family standards [Risk management] and COSO ERM [Enterprise Risk Management – Integrated Framework]. The Company's risk management framework is built on uniform principles embracing all business areas and management levels with a view to:

- increase the likelihood of achieving the company's goals;
- improve the resource allocation efficiency; and
- boost the Company's investment case and shareholder value.

The CRMF implementation and improvement initiatives are spearheaded by the Company's Vice-President for internal controls and risk management and its Risk Management Service.

## EVOLUTION OF THE CORPORATE RISK MANAGEMENT FRAMEWORK

The Company has been introducing new risk management methodologies and integrating them with key business processes and functions. Risk management training programmes take place on a regular basis to improve employees' professional skills ad competencies.

In 2016, as part of the corporate risk management framework development initiative:

- the Company adopted a Corporate Risk Management Policy, while the Company's President endorsed the new policy in a declaration of commitment;
- risk experts, whose responsibility is to coordinate risk management activities and provide knowledgebased support to risk owners, were appointed in various departments of the Head Office;
- key risks affecting the Company were identified, reported, analysed and documented along with related risk management procedures. The Management Board and the BD Audit Committee review risk-related reports on a regular basis;
- risk management regulations were developed and approved for our investment projects.

Key initiatives aimed at improving the corporate risk management framework include:

- creation of local risk management standards and guidelines for Company's units and business areas that are customised to fully fit their operations;
- integration of risk management practices into the core business processes of the Company, including strategic and operational planning and investment activities:
- phased deployment of IT systems and risk management automation tools in the Head Office, branches, and subsidiaries;
- continuing development of quantitative risk metrics and, in particular, creation of a quantitative model for key risks affecting the Company.

#### RISK INSURANCE

Insurance is one of our most important tools for managing risks and finances in the long-term perspective, and protecting the assets of the Company and its shareholders against any unforeseen losses related to our operations, including due to external hazards

The Group has centralised its insurance function to consistently implement uniform policies and standards supporting a comprehensive approach to managing insurance policies and fully covering every risk at all times.

As part of our risk mitigation initiatives, we have implemented a corporate insurance programme that covers assets, equipment failures and business interruptions across the Group. Our corporate insurance policies are issued by major Russian insurers in cooperation with an international broker. This helps the Company make sure that its risks are underwritten by highly reputable international re-insurers.

The same principles of centralisation apply to our freight, construction and installation, aircraft and ship insurance arrangements. The Group, as well as its directors and officers, carry business and third-party liability insurance.

To optimise terms of coverage and better manage covered risks, we follow the best mining practices.

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/ Risk management and control bodies / Risk management framework

#### **KEY RISKS AND THEIR MITIGANTS**

Risk type / Risk description

Suggestions from risk management function

#### Workplace injury risk

Failure to comply with the Norilsk Nickel Group's health and safety rules may result in threats to the employee's health and life, temporary suspension of operations, and property damage.

Pursuant to the Industrial Health and Safety Policy approved by the Company's Board of Directors, the Company undertakes to:

- ensure continued control over compliance with the health and safety requirements;
- improve the working conditions for employees of the Company and its contractors deployed at the Company's
  production facilities, including by implementing new technologies and labour saving solutions, and enhancing
  industrial safety at production facilities;
- provide staff with certified state-of-the-art personal protective equipment;
- carry out preventive and therapeutic interventions to reduce the potential impact of hazardous and dangerous production factors:
- regularly train and instruct employees and assess their health and safety performance, and conduct corporate workshops, including by deploying special simulator units;
- enhance methodological support for health and safety functions, including through the development and implementation of corporate health and safety standards;
- improve the risk assessment and management framework at the Group's companies and production facilities as part of the Risk Control project;
- analyse the competencies of line managers at the Group's companies and production facilities, develop health and safety training programmes and arrange relevant training sessions;
- provide training for managers under the programme to determine root causes of accidents using the best international practices ("Tree of Causes and Hazards", 5-why, etc.);
- provide information about the circumstances and causes of an accident to all employees of the Company, conduct ad hoc instruction sessions.

#### Price risk

Potential decrease in revenues due to lower prices for metals (nickel, copper, platinum, palladium) subject to the actual or potential changes in demand and supply on certain metal markets, global macroeconomic trends, and the financial community's interest in speculative / investment transactions in the commodity markets.

The Company reasonably accepts the risk of changes in price for key products, while continuously monitoring metal price (market) forecasts, and, should the risk materialise, the Company will consider cutting capital expenditures (revising the investment programme for projects that do not have a material impact on the Company's development strategy) as part of the budget process.

#### FX risk

USD depreciation against RUB, including due to changes in the Russian economy and the policy of the Bank of Russia, may adversely affect the Company's financial performance, as most of its revenues are denominated in USD, while most of its expenses are denominated in RUB.

The Company reasonably accepts the FX risk, while maintaining a balanced debt portfolio where USD-denominated borrowings prevail to ensure a natural hedge.

#### Compliance risk

The risk of legal liability and (or) legal sanctions, significant financial losses, suspension of production, revocation or suspension of a licence, loss of reputation, or other adverse effects arising from the Company's non-compliance with the applicable regulations, instructions, rules, standards or codes of conduct.

To manage this risk, the Company undertakes to:

- make sure that the Company complies with the applicable laws;
- defend the Company's interests during surveillance inspections or in administrative offence cases;
- use pre-trial and trial remedies to defend the Company's interests;
- include conditions defending the Company's interests in the contracts signed by the Company;
- implement anti-corruption, anti-money laundering and counter-terrorist financing initiatives;
- take actions to prevent unauthorised use of insider information and market manipulation;
- ensure timely and reliable information disclosures as required by the applicable Russian and international laws.

Risk type / Risk description

Suggestions from risk management function

## Technical and production risk

Technical, production, or natural phenomena, which, once materialised, could have a negative impact on the implementation of the production programme and cause technical incidents or reimbursable damage to third parties and the environment.

To manage this risk, the Company undertakes to:

- properly and safely operate its assets in line with the requirements of the technical documentation, technical rules and regulations as prescribed by the local laws across the Company's footprint;
- timely replace its fixed assets to achieve production safety targets;
- implement automated systems to control equipment's process flows;
- improve the maintenance and repair system:
- train and educate its employees both locally, on site, and centrally, through its corporate training centres;
- consistently identify and assess technical and production risks, develop and implement an organisational and technical action plan to mitigate such risks;
- engage, on an annual basis, independent surveyors to analyse the Company's exposure to disruptions in the
  production and logistics chain and assess related risks.

In 2016, key technical and production risks were insured as part of the property and business interruption (downtime) insurance programme, with emphasis laid on best risk management practices in the mining and metals industry.

## Risks related to changes in legislation and law enforcement practices

Adverse consequences for the Company due to changes in legislation and law enforcement practices.

To manage this risk, the Company undertakes to:

- continuously monitor changes in legislation and law enforcement practices in all business areas;
- perform legal due diligence of draft regulations and amendments;
- participate in discussions of draft regulations, both publicly and as part of the expert groups.

## Risk of revocation of ISO 9001 and ISO 14001 certificates

ISO 9001 and ISO 14001 certificates can be revoked in case of gross violations. Revocation would affect the competitiveness of the Company's products in international markets, product registration at exchanges, and customer and partner loyalty.

To manage this risk, the Company undertakes to:

- maintain and develop the Corporate Integrated Quality and Environmental Management System;
- implement environmental monitoring and reduce man-made impact on the environment;
- do planning and provide required training for employees;
- run internal audits in the Head Office's business units, branches and Russian subsidiaries subject to certification:
- prepare for external surveillance / recertification audits that involve the Company's representatives;
- implement an action plan for the Corporate Integrated Quality and Environmental Management System to switch to ISO 9001:2015 и ISO 14001:2015.

#### Risk of escalating social tensions in the regions of operations and strained social and labour relations among the workforce

Escalating tensions among the workforce due to the deterioration of social and economic conditions in the Company's regions of operation.

To manage this risk, the Company undertakes to:

- strictly abide by the collective bargaining agreements made between the Group's companies and employees;
- actively interact with regional and local authorities, and civil society institutions;
- fulfil its social obligations under public-private partnership agreements;
- hold public meetings to facilitate constructive dialogue between the private sector, public authorities and local communities;
- implement the World of New Opportunities charity programme aimed at supporting and promoting regional public initiatives;
- implement the Norilsk Upgrade project to introduce innovative solutions for sustainable social and economic development of the region;
- implement monitoring across the Group's operations;
- implement programmes to retain released employees and retrain them for other jobs at the Company's production facilities;
- conduct opinion polls among Norilsk's communities to learn more about their living standards, employment, migration trends and general social sentiment, and identify major challenges;
- implement social projects and programmes aimed at supporting employees and their families, as well as the Company's former employees.

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/ Risk management and control bodies /

#### Control bodies

#### INTERNAL CONTROL FRAMEWORK

The Company has an internal control system in place intended to promote the achievement of the Company's goals and enhance investor confidence in its business and corporate bodies. The internal control system is aimed at improving the effectiveness and efficiency of activities, keeping reliable and accurate financial and management accounts, ensuring compliance with the requirements of applicable Russian laws and the Company's by-laws.

The Company has the Internal Control Policy in place adopted by resolution of the Board of Directors on 25 August 2016 (Minutes of the Board of Directors No. GMK/32-pr-sd). In addition, internal control requirements, procedures, and processes are also covered by the procedure for "Internal Control Processes at MMC Norilsk Nickel", as well as by business unit regulations and other internal guidelines.

All internal control processes, principles, mechanisms, means, and procedures are structured into a system of elements:

- control environment;
- assessment of risks to business processes;
- control procedures;
- information and communications;
- monitoring of the internal control systems.

Entities that form the internal control system are structured on a number of levels, which include the Company and subsidiaries' corporate bodies, business units and employees as well as dedicated control bodies:

- Audit Committee,
- Internal Audit Department,
- Audit Commission.
- Internal Control Department,
- Financial Control Service,
- Risk Management Service.

In September 2016, the Company established an Internal Control and Risk Management Unit (Order of the President No. GMK/100-p). The unit included the Internal Control Department, Risk Management Service, and Financial Control Service.

#### **Internal Audit Department**

The Internal Audit Department was established to assist the Board of Directors and executive bodies in enhancing the Company's management efficiency and improving its financial and economic operations through a systematic and consistent approach to the analysis and evaluation of risk management and internal controls as tools to provide reasonable assurance that the Company will achieve its goals.

The Internal Audit Department conducts unbiased and independent audits, assessing how effective the internal control system and the risk management system are. Based on the audits, the Department prepares reports and proposals for the management on how to improve internal control and risk mitigation procedures, and also monitors the development and implementation of action plans to eliminate violations.

In order to ensure independence and objectivity, the Internal Audit Department functionally reports to the Board of Directors through the Audit Committee and has an administrative reporting line to the Company's President. The Audit Committee regularly reviews the performance of the Internal Audit Department.

In 2016, the Internal Audit Department remained focused on:

- accounts and repairs of process equipment;
- operations of utility and motor vehicles;
- construction and repairs;
- procurement;
- investment project management;
- compliance with health, safety and environment requirements.

In 2016, comprehensive audits were conducted in subsidiaries of the support complex, transport and logistics complex, and non-industrial assets. Based on these audits, the management developed action plans which provide for a range of activities aimed at improving internal control procedures and mitigating risks.

#### **Audit Commission**

The Audit Commission is a corporate body which monitors the financial and business operations of the Company. The Commission audits the Company's financial and business operations on an annual basis and at any time as decided by the Commission, resolutions of the General Meeting of Shareholders and the Board of Directors or as requested by shareholders who hold collectively at least 10% of the Company's voting shares. Following the review of financial and business results, the Audit Commission issues an opinion. Business operations were last audited in April–May 2016.

The Audit Commission works in the shareholders' interests and reports to the General Meeting of Shareholders, which elects members of the Audit Commission until the next Annual General Meeting of Shareholders. The Audit Commission is independent from the the Company's executive officers and its members do not hold positions in the Company's management bodies.

#### **Internal Control Department**

The Internal Control Department aims to create an efficient internal control framework that represents a combination of organisational processes, policies and guidelines, control procedures, corporate culture principles and actions that the internal control entities perform to provide reasonable assurance that the Company will achieve its targets; the Department's functions include:

- developing and improving an efficient internal control framework;
- ensuring a consistent approach to the design, operation and development of the internal control framework;
- detecting and preventing any waste, misuse or misappropriation of funds or assets of the Company and its subsidiaries, wrongdoings and theft;
- ensuring accuracy of metrics and measurement standards for the control and accounting of metal bearing products;
- arranging and implementing internal controls so as to combat illegal activities, such as money laundering and terrorism financing;
- managing the Corporate Trust Service operations.

#### **Financial Control Service**

The Financial Control Service audits the financial and business operations of the Company, its subsidiaries and affiliates to report and issue recommendations to the President and directors of the Company. The head of the Financial Control Service is appointed by a resolution adopted by the Company's Board of Directors.

#### **Corruption control**

The Company complies with Russian and international anti-corruption laws. In its interaction with government officials, the Company, as well as its employees and corporate bodies, comply with the applicable laws (including anti-corruption laws), thus fostering the Company's reputation and building up trust towards the Company from its shareholders, investors, business partners and other stakeholders.

As part of its effective anti-corruption combat, the Company has developed and approved the following anti-corruption regulations:

- Code of Business Ethics;
- Directors' Code of Corporate Conduct and Business
- Anti-Corruption Policy;
- Regulation on the Product Procurement Procedure for MMC Norilsk Nickel's Enterprises;
- Standard anti-corruption agreement appendix to the employment contract;

In the reporting year, the Audit Commission consisted of five people as prescribed by the resolution of the Annual General Meeting of Shareholders dated 10 June 2016

N°	Name	Primary employment
1.	Vladimir Shilkov	Chief Investment Officer at CIS Investment Advisers, Deputy Project Manager of the Financial Control Service at MMC Norilsk Nickel
2.	Anna Masalova	Chief Financial Officer, Moscow–McDonalds CJSC
3.	Georgy Svanidze	Head of Financial Department, member of the Management Board at Interros Holding Company
4.	Elena Yanevitch	Chief Executive Officer, Interpromleasing
5.	Artur Arustamov	Director of Price Control and Commercial Operations Department, RUSAL Global Management B. V.

#### Remuneration of the Audit Commission members in 2016

Remuneration types	thousand RUB	USD
Remuneration for the membership in a control body	6,300	93,981
Salary	4,445	66,309
Bonus	11,445	170,731
Commissions	0	0
Benefits	0	0
Compensation	0	0
Other types of remuneration	0	0
Total	22,190	331,022

- Regulation on Information Security;
- Regulation on the Prevention and Management of Conflicts of Interest;
- Regulation on Business Gifts;
- Procedure for anti-corruption due diligence on internal documents at the Head Office of MMC Norilsk Nickel.

Having joined the Anti-Corruption Charter of the Russian Business, the Company introduces dedicated anti-corruption programmes based on the Charter and set forth in the Company's Anti-Corruption Policy. In January 2016, the Company confirmed compliance with the Charter and secured its position on the Charter's Register.

#### The Company joined the Anti-Corruption Charter of the Russian Business.

In November 2016, the Company joined the United Nations Global Compact, which aims to promote recognition and practical application of ten basic principles of human rights, labour, environment and anti-corruption by businesses worldwide.

The Company's personnel receive ongoing training on anti-corruption matters. In August 2016, all personnel at the Head Office of the Company and personnel in managing and administrative positions at the Company's branches, representative office, and Russian subsidiaries were trained and tested in "Preventing Corruption" distance learning course. An important element of the Company's undertakings are corruption prevention

/ Risk management and control bodies / Control bodies

measures that are aimed at making employees clearly aware of the possible consequences and the "inevitability of penalty" not only for those who engage in corruption, but also for those who become aware of corruption and do not report it. Starting in 2015, all of the Company employees sign an agreement setting out their obligations in the anti-corruption area. All of the Company's employees are familiarised with the corporate Anti-Corruption Policy and related regulations . In December 2016, the Company held an anonymous survey among the employees of its Head Office in order to get their opinions on the extent of corruption in the Company and the efficiency of its anti-corruption efforts.

The Company ensures functioning of the Preventing and Fighting Corruption page on the corporate website containing information on anti-corruption regulations adopted, measures taken, preventive procedures introduced, legal training sessions organised and law-abidance promotion efforts taken.

#### Regulating the conflict of interest

One of the key anti-corruption measures is timely prevention of possible conflicts of interest and management of those. Procedures for assessing and settling conflicts of interest are set forth in the Regulation on the Prevention and Management of Conflicts of Interest at MMC Norilsk Nickel, approved by the Order of the Company's President in December 2015. As part of the above-mentioned Regulation, the Company has approved the Standard Declaration form for reporting conflicts of interest, to be filled in by candidates applying for vacant positions or by the Company's employees whenever required.

On top of that, the Company has undertaken measures aimed at preventing potential conflict of interest involving corporate bodies and key managers.

In December 2016, the Company approved the Report Form on relatives and family members to be submitted annually by members of corporate bodies.

Alongside with the measures listed above, the Regulation on the Prevention and Management of Conflicts of Interest at MMC Norilsk Nickel extends to all employees of the Company. The Regulation sets forth key principles aimed at meeting the balance of interests between the Company and its employees. These include obligation of each employee to disclose a conflict of interest and protection against liability in relation to the reported conflict. The Company undertakes measures aimed at identifying related-party transactions.

All measures combined, undertaken in order to identify and prevent conflicts of interest, minimise the probability of negative consequences for the Company.

#### Corporate trust service

In February 2010, the Company launched the Corporate Trust Service. It helps the Company's management promptly respond to reports of abuses, embezzlement and other violations. Shareholders and other stakeholders have an opportunity to report any actions that will or might result in financial damages or be detrimental to the business reputation of the Company. The key principles underlying the Corporate Trust Service include guaranteed confidentiality for whistleblowers and timely and unbiased consideration of all reports.

To serve the same purpose, the Company has arranged for a 24/7 hotline: +7 800 700-1941, +7 800 700-1945 (\*) or by email: skd@nornik.ru

Information on received an processed reports is disclosed annually by the Company as part of its CSR report.

#### Improving procurement<sup>1</sup>

The Company undertakes counterparty due diligence to confirm their reliability, solvency and financial stability; The Company reinforces anti-corruption principles by including an anti-corruption clause in its contracts with counterparties. Since 2004, the Company has moved its procurement to transparent procurement procedures. In 2014, the Company introduced a Regulation on general principles of procurement procedures for all MMC Norilsk Nickel's enterprises; The Company runs Tender and Investment Committees whose main focus is to make the Group's procurement and investment more efficient and transparent.

#### **Insider information**

The company implements actions to prevent unauthorised use of insider information. In accordance with Federal Law No. 224-FZ of 27 July 2010 "On Prevention of Unlawful Use of Inside Information and Market Manipulation and on Amendments to Certain Legislative Acts of the Russian Federation", as well as the Market Abuse Regulation of the European Union No. 596/2014 of 16 April 2014, the Company keeps a list of insiders, keeps track of transactions and constituent documents, as well as events, in order to control implementation of measures as provided in Russian and international legislation, which includes disclosure of insider information. The Company also undertakes other measures aimed at preventing unlawful use of insider information.

#### Integrated safety system of the Company

In 2016, MMC Norilsk Nickel's corporate security operations focused on regular updates and the implementation of a comprehensive security system, which drew heavily on the ongoing analysis of the full range of the Company's modern-day challenges and threats in a rapidly changing operating environment.

<sup>&</sup>lt;sup>1</sup> Detailed information on procurement by the Company is disclosed in the Procurement section of this Annual Report.

The ongoing implementation of the MBO (Management by Objectives) principles in the economic, corporate, information and physical security systems has enabled the Company to promptly and adequately respond to the production and financial risks, clamp down on embezzlement, implement initiatives to counter illicit trafficking of precious metals and metal bearing materials, and efficiently prevent in-house corruption.

In an effort to take public-private partnership in the field of security to a new level of quality, cooperation was established with government law-enforcement authorities, also in the Company's regions of operations. The Company pays special attention to complying with the federal anti-terrorism laws and enhancing security of the Company's strategic power and transportation facilities. In 2016, the close cooperation with law enforcement authorities helped the Company protect these facilities from any potential unlawful intrusion.

The Company ensures 100% safety and confidentiality of the employee and counterparty personal data through an ongoing upgrade of the dedicated protection systems. Steps are taken to integrate information security processes with other group-wide business processes and novel IT solutions. Measures undertaken in 2016 ensures a reliable protection of the Company's IT infrastructure. MMC Norilsk Nickel receive an outstanding award at InfoSecurity Russia 2016: Best Industrial IT Security.

The Company has further fostered its international activity in the field of industry-specific business security. As the chair of the Security Committee of the International Platinum Group Metals Association, the Company's representative works together with the United Nations Interregional Crime and Justice Research Institute (UNICRI) to prepare and implement practical recommendations in order to strengthen public-private partnerships aimed at fighting illicit transnational trafficking of precious metals. These initiatives received the support of world's major metal producers.

The Institute for Modern Security Challenges, the Company's subsidiary, has been developing new corporate tools to protect the Company's legitimate interests focusing on the analysis of best international practices, introduction of acknowledged standards and practices of secure development of mining companies, expert reviews and preparation of analytical materials. Their practical implementation is aimed at optimising the Company's security costs and more efficient process management.



MMC Norilsk Nickel receive an outstanding award at InfoSecurity Russia 2016: Best Industrial IT Security.



#### **EXTERNAL AUDIT**

The external auditor of both RAS and IFRS financial accounts for MMC Norilsk Nickel is endorsed by the General Meeting of Shareholders based on the recommendation by the Board of Directors following a tendering process endorsed by the Audit Committee under the Board of Directors.

Selection of the auditor for both RAS and IFRS financial accounts is done in line with the Procedure of Auditor Selection, as endorsed by the Company. A tender commission is established for the purpose of selecting the auditor. The commission produces lists of auditors who perform pest in the Russian market of audit services. The auditor whose conditions of RAS and IFRS audit are recognised to be the best following the Procedure, is then acknowledged as the winner of the tender by the Audit Committee and is recommended to the Board of Directors of the Company.

In March 2016, the Audit Committee under the Board of Directors considered the tender winner and recommended the firm to the Board of Directors. In June 2016, the General Meeting of Shareholders of MMC Norilsk Nickel, following the recommendation of the Board of Directors of the Company, approved JSC KPMG as the Company's auditor for both RAS and IFRS 2016 accounts.

The auditor's fee, as endorsed by the Board of Directors, stood at USD 2.2 mln, including overhead charges and VAT. The share of non-audit services rendered to the Company stood at 15% of the total KPMG fee for 2016.

In line with the audit contract, the auditor delivered the following:

- review of the interim abbreviated consolidated financial accounts as at 30 June 2016;
- audit of IFRS consolidated financial accounts for 2016;
- audit of RAS annual accounting/financial statement for 2016.





## FOCUS ON TIER I ASSETS

# FOR HIGHER SHAREHOLDER RETURNS



04

## INFORMATION FOR SHAREHOLDERS

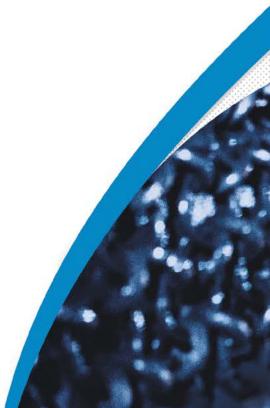
166 Authorised capital

167 Securities

170 Dividends

172 Shareholder rights

173 Transparency







## **AUTHORISED CAPITAL**

As at 31 December 2016, the authorised capital of MMC Norilsk Nickel comprised 158,245,476 ordinary shares with a par value of RUB 1 each.

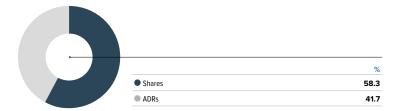
As at 31 December 2016, there were 40,169 persons registered in the shareholder register: 40,141 individuals and 28 legal entities, including 3 nominal holders.

MMC Norilsk Nickel's registrar is Independent Registrar Company. The registrar provides a full scope of services to the Company's shareholders. Shareholders (both individuals and legal entities) have access to the Shareholder's Personal Account, where they can view the number and price of their shares, dividends accrued and paid, upcoming general meetings of shareholders, and useful links and contacts; the account also lets them streamline shareholder register procedures by filling document forms in advance. The access to the personal account can be obtained at a branch of Independent Registrar Company<sup>1</sup>.

MMC Norilsk Nickel's share capital structure as at 31 December 2016



MMC Norilsk Nickel's shares and ADRs split as at 31 December 2016



#### Holders of MMC Norilsk Nickel's shares and ADRs

Holders	Share in the authorised capital, %		
noiders	31 December 2016	31 December 2015	
Olderfrey Holdings Ltd <sup>2</sup>	30.4	30.4	
UC Rusal Plc <sup>2</sup>	27.8	27.8	
Crispian Investments Ltd	4.2	5.5	
Other	37.6	36.3	

<sup>&</sup>lt;sup>1</sup> For more details on the registrar, please see the Contacts section

<sup>&</sup>lt;sup>2</sup> Indirect control via controlled entities

## **SECURITIES**

The Company's securities are the most liquid instruments on domestic and foreign equity markets.





For more details on trading in the Company's shares, please see the website: <a href="http://www.nornik.ru/en/investor-relations/shareholders/share-monitor">http://www.nornik.ru/en/investor-relations/shareholders/share-monitor</a>

#### ORDINARY SHARES

The Company's ordinary shares have been trading on Russian platforms since 2001. They are included in Moscow Exchange's First Level quotation list and rank among liquid instruments in the Russian equity market.

#### **Ticker symbols**

Trading platform	Financial instrument global identifier	Reuters instrument code
Moscow Exchange / Saint-	GMKN RN	GMKN.MM
Petersburg Exchange	GMKN RX	GMKN.RTS

#### AMERICAN DEPOSITARY RECEIPTS (ADRS)

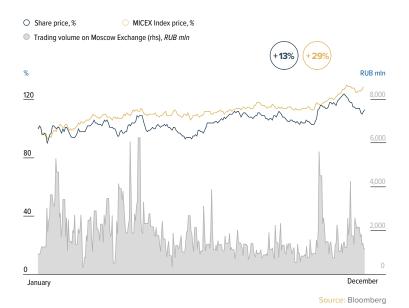
In 2001, MMC Norilsk Nickel issued ADRs for its shares, with the ADRs now trading outside of Russia. Currently, shares are convertible into ADRs at a ratio of 1:10. Depositary services for ADR transactions are rendered by the Bank of New York Mellon, while custody services are provided by VTB Bank. ADRs are traded on the US OTC market, and in the electronic trading system of OTC markets of the London and Berlin stock exchanges.

As at 31 December 2016, the total number of ADRs issued against MMC Norilsk Nickel's shares was 659,481,150, accounting for 41.67% of the authorised capital. The number of ADRs traded on stock exchanges is not constant, and depositary receipt holders may convert their securities into shares and vice versa.

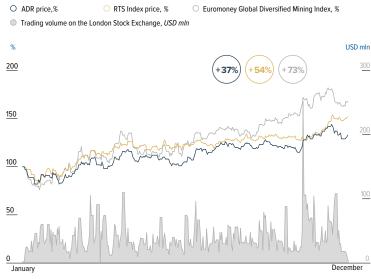
#### **ADR** ticker symbols

Trading platform	Financial instrument global identifier	Reuters instrument code
IOB, London Stock Exchange (London, UK)	MNOD LI	NKELyq.L
OTC Market (New York, USA)	NILSY US NILSY UV	NILSY.PK
Frankfurt Stock Exchange (Frankfurt, Germany)	NNIA GR NNIA GF	NKELy.F

#### Share and MICEX Index price and trading volume

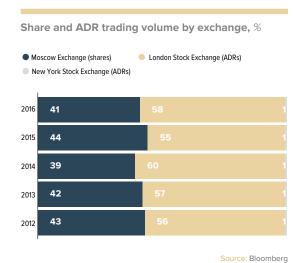


#### ADR and global index price and trading volume

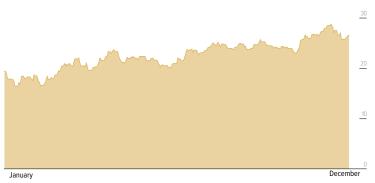


Source: Bloomberg

/ Securities /



#### Average monthly market capitalisation in 2016, USD bn



Source: Bloomberg

#### Share price and trading volume on Moscow Exchange

Date	Min	Max	Share price, RUB End of period	Volume, shares	Market cap at the end of period, RUB bn
2012	4,610	5,939	5,606	89,275,016	1,069
2013	4,106	6,089	5,400	76,120,053	855
2014	5,140	10,805	8,080	75,766,353	1,279
2015	8,590	12,106	9,150	59,126,636	1,448
2016	8,050	11,070	10,122	49,045,671	1,602
Q1	8,050	9,494	8,950	15,264,426	1,377
Q2	8,285	9,750	8,540	14,413,575	1,351
Q3	8,496	9,989	9,812	9,285,079	1,553
Q4	9,157	11,070	10,122	10,082,591	1,602

Source: Bloomberg

#### ADR price and trading volume on the OTC market of the London Stock Exchange

	3			9		
				ADR price, USD		Market cap at the end of
Date		Min	Max	End of period	Volume, ADR	period, USD mln
2012		14.4	20.5	18.4	1,168,251,876	35,133
2013		12.4	20.3	16.6	1,022,238,584	26,300
2014		14.2	21.5	14.2	1,166,038,332	22,503
2015		12.4	21.6	12.7	748,638,706	20,042
2016		10.4	18.2	16.8	701,221,106	26,569
Q1		10.4	14.0	12.9	195,655,725	19,148
Q2		12.4	15.0	13.3	155,963,196	23,135
Q3		13.3	16.3	16.0	174,451,054	25,288
Q4		14.6	18.2	16.8	178,151,131	26,569

In 2016, three leading international rating agencies confirmed their credit ratings for the Company. Moreover, MMC Norilsk Nickel is one of the five Russian companies that boast two investment grade credit ratings. The Moody's rating is limited by the sovereign rating.<sup>1</sup>

In February 2016, MMC Norilsk Nickel issued BO-05 series exchange-traded bonds for a total amount of RUB 15 bn. The bonds are due in 2026 and callable in 2021.

In 2016, there were three outstanding Eurobond issues by MMC Norilsk Nickel for a total amount of USD 2,750 mln with maturities in 2018, 2020, and 2022.

#### **CREDIT RATING / OUTLOOK**

**Fitch Ratings** 

Date of last change / upgrade of rating

BBB-/Stable

19.10.2016

Standard & Poor's

BBB-/Stable

25.10.2016

Moody's

Ba1/Negative

26.04.2016

#### Rouble bonds

Instrument	Exchange-traded bonds, BO-05
Issuer	MMC Norilsk Nickel
ISIN	RU000A0JW5C7
Offering date	19 February 2016
Maturity date	06 February 2026
Offering amount	RUB 15 bn
Coupon rate	11.60%
Coupon period	Each 182 days starting from the offering date

#### Eurobonds

Issue rating	BBB-/Ba1/BBB-	BBB-/Ba1/BBB-	BBB-/Ba1/BBB-
Coupon dates	30 October / 30 April	28 October / 28 April	14 October / 14 April
Maturity date	30 April 2018	28 October 2020	14 October 2022
Offering date	30 April 2013	28 October 2013	14 October 2015
Coupon rate	4.375%	5.55%	6.625%
Offering amount	USD 750 mln	USD 1,000 mln	USD 1,000 mln
Issuer	MMC Finance Ltd	MMC Finance Ltd	MMC Finance Ltd
Instrument	Eurobonds 2018 (LPN)	Eurobonds 2020 (LPN)	Eurobonds 2022 (LPN)

 $<sup>^{\</sup>bf 1}$  Russia's sovereign rating: BB+ by Standard & Poor's, Ba1 by Moody's, BBB- by Fitch Ratings.

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## **DIVIDENDS**

#### DIVIDEND POLICY

MMC Norilsk Nickel's Dividend Policy aims to balance the interests of the Company and its shareholders, enhance the Company's investment case and market capitalisation, and ensure respect of shareholder rights.

The decision to pay dividends is made by the General Meeting of Shareholders based on recommendations of the Board of Directors. Under the Company's dividend policy, in determining the recommended dividend amount, the Board of Directors seeks to make sure that annual dividends on the Company's shares account for at least 30% of the Group's consolidated EBITDA.

#### **KEY PRINCIPLES OF THE COMPANY'S DIVIDEND POLICY:**

- transparency: a clear mechanism of dividend calculation and payout;
- balance: dividend payouts to shareholders along with long-term business development and capitalisation growth for the Company;
- When calculating dividends, MMC Norilsk Nickel accounts for the cyclical nature of the metals market and for the need to maintain a high level of creditworthiness. Thus, the amount of dividends may change depending on the Company's operating profit and leverage.

#### DIVIDEND REPORT

Dividends are paid to individuals/entities whose rights to shares are recorded in the shareholder register by Independent Registrar Company, MMC Norilsk Nickel's registrar.

Individuals/entities whose rights to shares are recorded by a nominee shareholder are paid dividends via their nominee shareholder.

In accordance with Clause 9. Article 42 of Federal Law No. 208-FZ On Joint-Stock Companies dated 26 December 1995, any person who has not received the declared dividends due to the fact that their accurate address or banking details where not available to the company or the registrar as required, or due to any other delays on the part of the creditor, may request payment of such dividends (unpaid dividends) during the period of three years from the date of the resolution to pay the same.

Dividends paid for 9M 2016

USD 1.2 bn

#### Dividends paid<sup>1</sup>

Period	RUB mln	USD mln
2016	86,712	1,232
2015	154,227	2,859
2014	159,914	3,281
2013	98,354	2,989
2012	31,014	960

#### Dividend history<sup>2</sup>

Daviad	Decla	ared dividends <sup>3</sup>	Dividen	d per share/ADR <sup>3</sup>
Period	RUB mIn	USD mln	RUB	USD
Total for 2016	140,894	2,339	890	14.78
FY 2016 <sup>4</sup>	70,593	1,239	446	7.83
9M 2016	70,301	1,100	444	6.95
Total for 2015	135,642	2,148	857	13.57
FY 2015	36,419	548	230	3.46
9M 2015	50,947	800	322	5.06
6M 2015	48,276	800	305	5.06
Total for 2014	226,668	4,798	1,432	30.32
FY 2014	106,031	2,018	670	12.75
9M 2014	120,637	2,780	762	17.57
Total for 2013	74,246	2,200	469	13.90
FY 2013	39,321	1,102	248	6.96
9M 2013	34,925	1,098	221	6.94
Total for 2012	64,430	2,008	401	12.69

For dividend history covering 2011 and earlier periods, please see the website.

The discrepancy with the IFRS statements is due to the indicator being calculated at the official Bank of Russia exchange rate on the date of the Board of Directors' meeting.

On 28 April 2017, MMC Norilsk Nickel's Board of Directors recommended the General Meeting of Shareholders to approve dividends for FY 2016

#### TAXATION

Income from securities is taxable pursuant to the applicable tax laws of the Russian Federation<sup>1</sup>.

Reduced tax rates or exemptions may apply to individuals and foreign entities who are not tax residents of Russia pursuant to international double tax treaties.

Starting from 1 January 2017, in order to apply for tax benefits under international double tax treaties, foreign organisations must confirm their permanent residence in a state which has a double tax treaty signed with Russia, and also provide the income paying tax agent with a document confirming the right of the organisation to receive such income (Clause 1, Article 312 of the Russian Tax Code).

Should the organisation fail to provide such confirmation by the date of the payout, the Russian tax agent shall withhold the tax at the standard rates stipulated by Clauses 2 and 3, Article 284 of the Russian Tax Code.

#### **DIVIDEND TAX FORMULA<sup>2</sup>**

#### $AT=P \cdot TR \cdot (D_1 - D_2)$

**AT –** amount of tax to be withheld from the income of the recipient of dividends;

P - proportion of the dividend amount payable to one recipient to the total dividend amount to be distributed;

TR - tax rate for Russian entities (0% or 13%);

**D**<sub>4</sub> – dividend amount to be distributed among all recipients;

**D**<sub>2</sub> – dividend amount<sup>3</sup> received by the entity paying dividends, provided that previously these amounts were not included in the taxable income.

#### Tax treatment of income from securities

Item	Income from securities transactions, %	Interest income on securities, %	Dividend income on securities, %
Individuals			
Residents	13	13	13
Non-residents	30 <mark>4</mark>	30	15
Legal entities			
Russian companies	20 <sup>5</sup>	20	13 <sup>6</sup>
Non-resident companies	20	20	15

Chapter 23 (Personal Income Tax) and Chapter 25 (Corporate Income Tax) of the Russian Tax Code

The formula is not applicable to dividends paid to foreign entities and/or individuals who are not tax residents of Russia.

Excluding the dividend amount eligible for a zero tax rate pursuant to Subclause 1, Clause 3, Article 284 of the Russian Tax Code.

If shares or other securities are sold in Russia.

<sup>&</sup>lt;sup>5</sup> Or 0%, if shares (interests) of Russian entities acquired on or after 1 January 2011 are sold, provided that as at the date of their sale the shares (interests) have been owned for over five years and subject to one of the conditions stipulated by Clause 2, Article 284.2 of the Russian Tax Code.

Or 0%, if as at the date of the dividend payout resolution a Russian entity has been owning an interest of 50% (and more) in the authorised capital of the entity paying dividends, for 365 days (and more).

## SHAREHOLDER RIGHTS

All shareholders, including minority and institutional shareholders, enjoy equal rights and treatment in their relations with the Company, including the rights to:

- participate in General Meetings of Shareholders and vote on all items within its competence;
- receive dividends should the General Meeting of Shareholders pass the relevant resolution:
- receive part of the Company's property in case of its liquidation:
- have access to information about the Company's operations.

The Company has an approved Regulation on the General Meeting of Shareholders in place that sets forth procedures to convene, prepare and conduct its general meetings<sup>1</sup>.

The Annual General Meeting of Shareholders is held on an annual basis not earlier than three months before and not later than six months after the end of the financial year. General meetings other than Annual General Meetings of Shareholders are defined as Extraordinary General Meetings of Shareholders and are held as per resolution of the Board of Directors at their discretion or at the request of the Audit Commission, the Company's auditor, or shareholders who own at least 10% of the Company's voting shares as at the date of the request.

The notice of a General Meeting of Shareholders is published in the Rossiyskaya Gazeta newspaper and the Taimyr newspaper and posted on the Company's website (<a href="http://www.nornik.ru">http://www.nornik.ru</a>) not later than 30 days prior to the date of the general meeting. If a general meeting is conducted in the form of absentee voting (by ballot), the notice is given in the above mentioned newspapers at least 30 days prior to the deadline set for the collection of ballot sheets

Holders of MMC Norilsk Nickel's shares who are registered in the shareholder register receive a ballot from the Company and are entitled to exercise their voting right by sending the ballot sheet via mail or by attending the General Meeting of Shareholders (in person or by proxy).

Holders of MMC Norilsk Nickel's shares who are clients of nominal holders may also participate in the General Meeting of Shareholders by instructing the nominal holders in accordance with the Russian securities law.

ADR holders do not receive ballot sheets directly from the Company. According to the depository agreement, the Company notifies the depository, which in turn in the shortest possible time, and provided it is not prohibited by the Russian law, notifies ADR holders about the general meeting and encloses voting materials and a document describing the voting procedure for ADR holders. To exercise their voting rights, ADR holders instruct the depository accordingly.

A General Meeting of Shareholders shall be considered properly convened (having a quorum) if the shareholders who own in aggregate more than 50% of the votes granted by the voting shares of the Company are present at the meeting.

Shareholders owning at least 2% of the Company's voting shares may propose items to be included in the agenda of Annual General Meetings of Shareholders, and may put forward candidates for election to the Board of Directors and Audit Commission of the Company as and when prescribed by the Federal Law and the Company's Charter.

Voting at the General Meeting of Shareholders is conducted in accordance with the "one share, one vote" rule, unless otherwise provided for in the Federal Law. Members of the Company's Board of Directors are elected through cumulative voting, i.e. the number of votes held by each shareholder is multiplied by the number of persons to be elected to the Board of Directors.

For more details on the Regulation on the General Meeting of Shareholders, please see the Investor Relations section on the Company's corporate website

## **TRANSPARENCY**

The key disclosure principles of the Company are regularity and timeliness of providing information, its availability for the majority of shareholders and other stakeholders, as well as reliability and completeness of information while maintaining a reasonable balance between transparent operations and commercial interests of the Company.

The Company's disclosure procedures comply with the Russian law, regulations of the UK Financial Services Authority (FSA), and all relevant rules of the Moscow and London stock exchanges. MMC Norilsk Nickel also seeks to improve transparency by releasing additional information in excess of that required by the law. The Company discloses information to shareholders and investors through the following channels: corporate website, annual report, CSR report, presentations, press releases, statements on material facts, disclosure feeds, and RNS. The Company makes a point of simultaneously disclosing material information to both domestic and foreign markets.

The Company quarterly disclosures include the purpose of providing the market with the required

The Company maintains an ongoing dialogue with both existing shareholders and potential investors. In 2016, investor community and shareholder relations were the focus of continued improvement to enhance transparency. As part of these efforts, the Company' IR team held over 300 meetings with investors and participated in over 20 investors conferences.

All material information, including presentations, reports, press releases, statements on material facts, etc. are also available on the Company's corporate website (http://www.nornik.ru/). The corporate website offers prompt updates for investors and additional means of communication to reach out to all stakeholders

The Company's 2015 Annual Report won 14 awards and diplomas at prestigious Russian and foreign contests and ratings, including those hosted by the Moscow Exchange, Expert RA, Report Watch, Corporate & Financial Awards, LACP, and ARC.

operating indicators, the issuer's quarterly reports, RAS financial (accounting) statements, and affiliates lists. IFRS statements are disclosed on a semiannual basis. The IFRS disclosures are followed by conference calls and webcasts of the Company's senior management with analysts and investors for information and comments. In addition, the Company makes extensive use of all communication tools available, including participation of senior managers in conferences, speeches, presentations, Strategy Days, and production site visits for investors1.

In 2016 the Company's IR team held over

meetings with investors



<sup>1</sup> For more details on the events, please see the IR Calendar on the Company's website: http://www.nornik.ru/en/investor-relations/kalendar1



# BETTER FINANCIAL PERFORMANCE

## FOR SUSTAINABLE FUTURE



05

## CONSOLIDATED FINANCIAL STATEMENTS

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	and approval of the consolidated financial statements
	for the year ended 31 December 2016

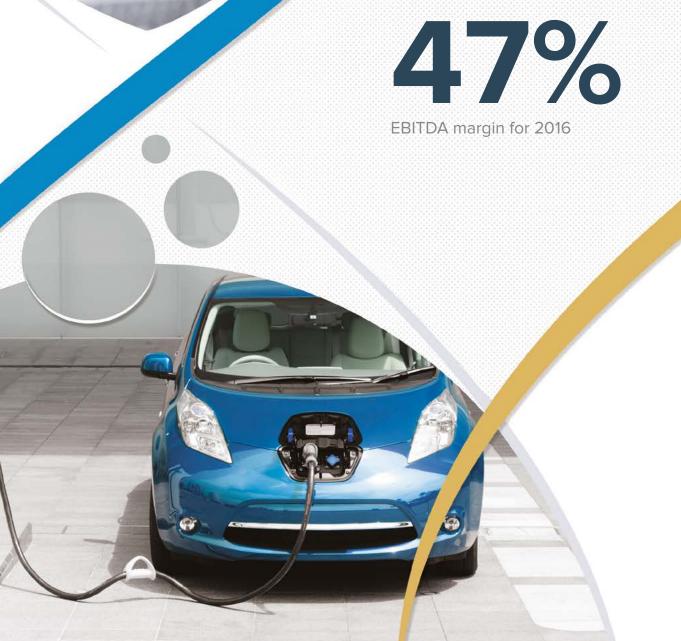
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# STATEMENT OF MANAGEMENT'S RESPONSIBILITIES FOR THE PREPARATION AND APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS

for the year ended 31 december 2016

The following statement, which should be read in conjunction with the auditors' responsibilities stated in the auditors' report set out on page 177, is made with a view to distinguishing the respective responsibilities of management and those of the auditors in relation to the consolidated financial statements of Public Joint Stock Company "Mining and Metallurgical Company Norilsk Nickel" and its subsidiaries (the "Group").

Management is responsible for the preparation of the consolidated financial statements that present fairly in all material aspects the consolidated financial position of the Group at 31 December 2016 and consolidated statements of income, comprehensive income, cash flows and changes in equity for the year then ended, in accordance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- selecting suitable accounting principles and applying them consistently;
- making judgements and estimates that are reasonable and prudent;
- stating whether IFRS have been followed, subject to any material departures disclosed and explained in the consolidated financial statements; and
- preparing the consolidated financial statements on a going concern basis, unless it is inappropriate to presume that the Group will continue in business
  for the foreseeable future.

Management, within its competencies, is also responsible for:

- designing, implementing and maintaining an effective system of internal controls throughout the Group;
- maintaining statutory accounting records in compliance with local legislation and accounting standards in the respective jurisdictions in which the Group operates;
- taking steps to safeguard the assets of the Group; and
- detecting and preventing fraud and other irregularities.

The consolidated financial statements for the year ended 31 December 2016 were approved by:

President

V.O. Potanin

Senior Vice President – Chief Financial Officer

S.G. Malyshev

Moscow, Russia 15 March 2017



JSC "KPMG" 10 Presnenskaya Naberezhnaya Moscow, Russia 123112

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# INDEPENDENT AUDITOR'S REPORT

To the Shareholders and Board of Directors PJSC "Mining and Metallurgical Company Norilsk Nickel"

#### REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

We have audited the consolidated financial statements of PJSC "Mining and Metallurgical Company Norilsk Nickel" and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as at 31 December 2016, the consolidated income statement, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2016, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS).

#### **Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the independence requirements that are relevant to our audit of the consolidated financial statements in the Russian Federation and with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the requirements in the Russian Federation and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### **Key Audit Matters**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Audited entity: PJSC "Mining and Metallurgical Company Norilsk Nickel" Registration No. in the Unified State Register of Legal Entities 1028400000298. Dudinka, Krasnoyarsk Region, Russian Federation.

Independent auditor: JSC "KPMG", a company incorporated under the Laws of the Russian Federation, a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KMPG International"), a Swiss entity,

Registration No. in the Unified State Register of Legal Entities 1027700125628. Member of the Self-Regulated organization of auditors "Russian Union of auditors" (Association). The Principal Registration Number of the Entry in the Register of Auditors and Audit Organisations: No. 11603053203.

#### Assets held for sale - Nkomati

Please refer to the Note 21 in the financial statements.

#### The key audit matter

As of 31 December 2016 the Group had a 50% interest in Nkomati Nickel Mine (hereinafter "Nkomati"). This investment has been classified as held for sale since 31 December 2013. As of 31 December 2016, the carrying value of this investment was USD 177 million

The Group measures its investment in Nkomati at the lower of its carrying value and fair value less cost to sell. As of 31 December 2016, the fair value less cost to sell was determined using discounted cash flows.

Given the significant judgment involved and the inherent uncertainty in measuring fair value less cost to sell, we considered this area to be a key audit matter.

#### How the matter was addressed in our audit

Our audit procedures included testing the significant assumptions (metal price forecasts and discount rate) and evaluating the methodology used by the Group. We involved our own valuation specialists to assist us in evaluating the methodology used by the Group and to compare:

- projected metal prices to publicly available market information and to applicable adjustments to market price;
- discount rate calculation to our own assessment of key components of discount rate calculation;
- results of the model to our own sensitivity analysis.
   In addition, we tested the Group's cash flow forecasts by comparing production volumes to reserve estimates and historical operating performance of Nkomati.
   We also assessed appropriateness and completeness of the disclosures in the financial statements in relation to uncertainties and judgment involved in determining the fair value less cost to sell.

#### Other information

Management is responsible for the other information. The other information comprises the Financial Overview (MD&A), which we obtained prior to the date of this auditors' report, and the information included in other sections of Annual report for 2016, which is expected to be made available to us after that date (but does not include the consolidated financial statements and our auditors' report thereon).

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we have obtained prior to the date of this auditors' report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

#### Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the planning and performance of the audit.

#### We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities and business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We are also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner responsible for the audit resulting in this independent auditor's report is:



# **CONSOLIDATED FINANCIAL STATEMENTS**

for the year ended 31 December 2016

# Consolidated income statement

for the year ended 31 December 2016

US Dollars million

	Notes	For the year ended 31 December 2016	For the year ended 31 December 2015
Revenue			
Metal sales	6	7,646	7,883
Other sales		613	659
Total revenue		8,259	8,542
Cost of metal sales	7	(3,651)	(3,165)
Cost of other sales		(508)	(616)
Gross profit		4,100	4,761
General and administrative expenses	9	(581)	(554)
Selling and distribution expenses	8	(93)	(129)
Impairment of non-financial assets	14	(61)	(284)
Other net operating expenses	10	(84)	(288)
Operating profit		3,281	3,506
Foreign exchange gain/(loss), net		485	(865)
Finance costs	11	(453)	(326)
Impairment of available-for-sale investments	16	(153)	-
Loss from disposal of subsidiaries and assets classified as held for sale	21	(4)	(302)
Income from investments, net	12	114	215
Share of profits of associates		6	16
Profit before tax		3,276	2,244
Income tax expense	13	(745)	(528)
Profit for the year		2,531	1,716
Attributable to:			
Shareholders of the parent company		2,536	1,734
Non-controlling interests		(5)	(18)
		2,531	1,716
EARNINGS PER SHARE			
Basic and diluted earnings per share attributable to shareholders of the parent company (US Dollars per share)	22	16.1	11.0

# Nornickel // Annual report 2016

# Consolidated statement of comprehensive income for the year ended 31 December 2016

	For the year ended 31 December 2016	For the year ended 31 December 2015
Profit for the year	2,531	1,716
Other comprehensive income/(loss)		
Items to be reclassified to profit or loss in subsequent periods:		
Increase in fair value of available-for-sale investments	-	74
Realised gain on disposal of available-for-sale investments	-	(73)
Reclassification of foreign currency translation reserve on disposed assets classified as held for sale to profit or loss	-	326
Effect of translation of foreign operations	13	(26)
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net	13	301
Items not to be reclassified to profit or loss in subsequent periods:		
Effect of translation to presentation currency	561	(868)
Other comprehensive income/(loss) not to be reclassified to profit or loss in subsequent periods, net	561	(868)
Other comprehensive income/(loss) for the year, net of tax	574	(567)
Total comprehensive income for the year, net of tax	3,105	1,149
Attributable to:		
Shareholders of the parent company	3,106	1,173
Non-controlling interests	(1)	(24)
	3,105	1,149

/ Consolidated financial statements /

# Consolidated statement of financial position At 31 December 2016

	Notes	At 31 December 2016	At 31 December 2015
ASSETS			
Non-current assets			
Property, plant and equipment	14	9,006	6,392
Intangible assets		94	50
Investment property	15	93	83
Other financial assets	16	187	62
Other taxes receivable	17	2	_
Deferred tax assets	13	56	42
Other non-current assets	18	1,013	117
		10,451	6,746
Current assets			
Inventories	18	1,895	1,698
Trade and other receivables	19	170	167
Advances paid and prepaid expenses		68	55
Other financial assets	16	8	1
Income tax receivable		82	234
Other taxes receivable	17	276	199
Cash and cash equivalents	20	3,301	4,054
		5,800	6,408
Assets classified as held for sale	21	206	217
		6,006	6,625
TOTAL ASSETS		16,457	13,371

	Notes	At 31 December 2016	At 31 December 2015
EQUITY AND LIABILITIES			
Capital and reserves			
Share capital	22	6	6
Share premium		1,254	1,254
Treasury shares	22	-	(196)
Translation reserve		(4,778)	(5,348)
Retained earnings	28	7,340	6,523
Equity attributable to shareholders of the parent company		3,822	2,239
Non-controlling interests	23	74	22
		3,896	2,261
Non-current liabilities			
Loans and borrowings	24	7,274	7,142
Provisions	26	435	357
Trade and other long-term payables	18	514	_
Deferred tax liabilities	13	303	205
Other long-term liabilities		59	30
		8,585	7,734
Current liabilities			
Loans and borrowings	24	578	1,124
Trade and other payables	27	1,610	1,010
Dividends payable	28	1,164	698
Employee benefit obligations	25	299	215
Provisions	26	183	205
Income tax payable		2	5
Other taxes payable	17	138	95
		3,974	3,352
Liabilities associated with assets classified as held for sale	21	2	24
		3,976	3,376
TOTAL LIABILITIES		12,561	11,110
TOTAL EQUITY AND LIABILITIES		16,457	13,371

/ Consolidated financial statements /

# Consolidated statement of cash flows

for the year ended 31 December 2016

US Dollars million

	For the year ended 31 December 2016	For the year ended 31 December 2015
OPERATING ACTIVITIES		
Profit before tax	3,276	2,244
Adjustments for:		
Depreciation and amortisation	557	506
Impairment of non-financial assets	61	284
Impairment of available-for-sale investments	153	-
Loss on disposal of property, plant and equipment	16	20
Share of profits of associates	(6)	(16)
Loss from disposal of subsidiaries and assets classified as held for sale	4	302
Change in provisions and allowances	13	120
Finance costs and income from investments, net	360	137
Foreign exchange (gain)/loss, net	(485)	865
Other	9	27
	3,958	4,489
Movements in working capital:		
Inventories	(751)	(340)
Trade and other receivables	(3)	74
Advances paid and prepaid expenses	13	(2)
Other taxes receivable	(36)	(62)
Employee benefit obligations	44	42
Trade and other payables	816	152
Provisions	(45)	(4)
Other taxes payable	26	28
Cash generated from operations	4,022	4,377
Income tax paid	(530)	(672)
Net cash generated from operating activities	3,492	3,705

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	For the year ended 31 December 2016	For the year ended 31 December 2015
INVESTING ACTIVITIES		
Proceeds from sale of associate	-	10
Purchase of property, plant and equipment	(1,648)	(1,626)
Purchase of other financial assets	(150)	_
Purchase of intangible assets	(47)	(28)
Purchase of other non-current assets	(31)	(31)
Loans issued	(103)	(27)
Net change in deposits placed	(10)	91
Proceeds from sale of other financial assets	10	204
Proceeds from disposal of property, plant and equipment	1	1
Proceeds from disposal of subsidiaries and assets classified as held for sale	3	_
Interest received	74	101
Dividends received	-	5
Net cash used in investing activities	(1,901)	(1,300)
FINANCING ACTIVITIES		
Proceeds from loans and borrowings	936	3,192
Repayments of loans and borrowings	(1,741)	(727)
Financial lease payments	(5)	(1)
Dividends paid	(1,232)	(2,859)
Interest paid	(591)	(376)
Proceeds from sale of a non-controlling interest in a subsidiary	80	_
Buy-out of a non-controlling interest in a subsidiary	-	(31)
Sale of own shares from treasury stock	154	_
Acquisition of own shares from shareholders	-	(196)
Net cash used in financing activities	(2,399)	(998)
Net (decrease)/increase in cash and cash equivalents	(808)	1,407
Cash and cash equivalents at the beginning of the year	4,054	2,793
Cash and cash equivalents related to assets classified as held for sale at the beginning of the year	38	5
Less: cash and cash equivalents related to assets classified as held for sale at the end of the year	(20)	(38)
Effects of foreign exchange differences on balances of cash and cash equivalents	37	(113)
Cash and cash equivalents at the end of the year	3,301	4,054

/ Consolidated financial statements /

# Consolidated statement of changes in equity for the year ended 31 December 2016

		1	Equity attributable to shareholde	ers of the parent company
	Notes	Share capital	Share premium	Treasury shares
Balance at 1 January 2015		6	1,254	_
Profit/(loss) for the year		_	_	-
Other comprehensive loss		_	_	_
Total comprehensive income/(loss) for the year		_	_	_
Dividends	28	-	_	_
Non-controlling interest on disposal of assets classified as held for sale		-	-	_
Acquisition of own shares from shareholders	22	-	_	(196)
Decrease in non-controlling interest due to increase in ownership of a subsidiary		-	-	_
Balance at 31 December 2015		6	1,254	(196)
Profit/(loss) for the year		-	-	_
Other comprehensive income		-	-	_
Total comprehensive income/(loss) for the year		_	_	_
Dividends	28	-	_	_
Increase in non-controlling interest due to decrease in ownership of a subsidiary	23	-	-	_
Sale of own shares from treasury stock	22	-	_	196
Decrease in non-controlling interest due to increase in ownership of a subsidiary		-	-	_
Balance at 31 December 2016		6	1,254	_

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	Non controlling interests	nareholders of the parent company	Equity attributable to shareholders of the parent compa	
Total	Non-controlling interests	Total	Retained earnings	Translation reserve
4,793	25	4,768	8,295	(4,787)
1,716	(18)	1,734	1,734	-
(567)	(6)	(561)	-	(561)
1,149	(24)	1,173	1,734	(561)
(3,497)	_	(3,497)	(3,497)	_
12	12	-	-	-
(196)	-	(196)	-	-
-	9	(9)	(9)	-
2,261	22	2,239	6,523	(5,348)
2,531	(5)	2,536	2,536	-
574	4	570	-	570
3,105	(1)	3,106	2,536	570
(1,708)	_	(1,708)	(1,708)	_
80	55	25	25	-
158	-	158	(38)	-
_	(2)	2	2	-
3,896	74	3,822	7,340	(4,778)

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# Notes to the consolidated financial statements

For the year ended 31 December 2016

US Dollars million

#### 1. GENERAL INFORMATION

#### Organisation and principal business activities

Public Joint-Stock Company "Mining and Metallurgical Company Norilsk Nickel" (the "Company" or "MMC Norilsk Nickel") was incorporated in the Russian Federation on 4 July 1997. The principal activities of the Company and its subsidiaries (the "Group") are exploration, extraction, refining of ore and nonmetallic minerals and sale of base and precious metals produced from ore. Further details regarding the nature of the business and structure of the Group are presented in note 34.

Major production facilities of the Group are located in Taimyr and Kola Peninsulas of the Russian Federation, and in Finland.

#### **BASIS OF PREPARATION**

#### Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("IFRS").

The entities of the Group maintain their accounting records in accordance with the laws, accounting and reporting regulations of the jurisdictions in which they are incorporated and registered. Accounting principles in certain jurisdictions may differ substantially from those generally accepted under IFRS. Financial statements of such entities have been adjusted to ensure that the consolidated financial statements are presented in accordance with IFRS.

The Group issues a separate set of IFRS consolidated financial statements to comply with the requirements of Russian Federal Law No 208-FZ On consolidated financial statements ("Law 208-FZ") dated 27 July 2010.

#### **Basis of measurement**

The consolidated financial statements of the Group are prepared on the historical cost basis, except for:

- mark-to-market valuation of by-products, in accordance with IAS 2 Inventories;
- mark-to-market valuation of certain classes of financial instruments, in accordance with IAS 39 Financial Instruments: Recognition and Measurement.

#### 2. CHANGES IN ACCOUNTING POLICIES

#### Reclassification

At 31 December 2016 management reassessed reclassification between cost of metal sales, cost of other sales and selling and distribution expenses in order to better align cost of sales structure with management accounts and reporting (refer to notes 7 and 8). Information for the year ended 31 December 2015 has been reclassified to conform with the current period presentation.

Other certain items presented in the consolidated financial statements were also reclassified to conform with current year presentation.

#### Standards and interpretations effective in the current year

In the preparation of these consolidated financial statements the Group has adopted all new and revised International Financial Reporting Standards and Interpretations issued by International Financial Reporting Interpretations Committee ("IFRIC") that are mandatory for adoption in annual periods beginning on 1 January 2016.

Adoption of an Interpretation and amendments to the existing Standards detailed below did not have significant impact on the accounting policies, financial position or performance of the Group:

- IFRS 5 Non-current Assets Held for Sale and Discontinued Operations (amended);
- IFRS 7 Financial Instruments: Disclosures (amended);
- IFRS 10 Consolidated Financial Statements (amended);
- IFRS 11 Joint Arrangements (amended);
- IFRS 12 Disclosure of Interests in Other Entities (amended);
- IFRS 14 Regulatory Deferral Accounts;
- IAS 1 Presentation of Financial Statements (amended);
- IAS 16 Property, Plant and Equipment (amended);
- IAS 19 Employee Benefits (amended);

- IAS 27 Separate Financial Statements (amended);
- IAS 28 Investments in Associates and Joint Ventures (amended);
- IAS 34 Interim Financial Reporting (amended);
- IAS 38 Intangible Assets (amended);
- IAS 41 Agriculture (amended).

#### Standards and interpretations in issue but not yet effective

At the date of authorisation of these consolidated financial statements, the following Standards and Interpretations or amendments to them were in issue but not yet effective:

Standards and Interpretations	Effective for annual periods beginning on or after
IFRS 1 First-time Adoption of International Financial Reporting Standards (amended)	1 January 2018
IFRS 2 Share-based Payment (amended)	1 January 2018
IFRS 4 Insurance Contracts (amended)	1 January 2018
IFRS 9 Financial Instruments (amended)	1 January 2018
IFRS 12 Disclosure of Interests in Other Entities (amended)	1 January 2017
IFRS 15 Revenue from Contracts with Customers	1 January 2018
IFRS 16 Leases	1 January 2019
IAS 7 Statement of Cash Flows (amended)	1 January 2017
IAS 12 Income Taxes (amended)	1 January 2017
IAS 28 Investments in Associates and Joint Ventures (amended)	1 January 2018
IAS 40 Investment Property (amended)	1 January 2018

Management of the Group plans to adopt all of the above standards and interpretations in the Group's consolidated financial statements for the respective periods. The impact of adoption of these standards and interpretations on the consolidated financial statements of future periods is currently being assessed by management.

#### 3. SIGNIFICANT ACCOUNTING POLICIES

#### **Basis of consolidation**

#### **Subsidiaries**

The consolidated financial statements incorporate financial statements of the Company and its subsidiaries, from the date that control effectively commenced until the date that control effectively ceased. Control is achieved where the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Non-controlling interests in the net assets (excluding goodwill) of consolidated subsidiaries are identified separately from the Group's equity therein. Non-controlling interests include interests at the date of the original business combination and non-controlling share of changes in net assets since the date of the combination. Total comprehensive income must be attributed to the interest of the Group and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Non-controlling interests may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis.

All intra-group balances, transactions and any unrealised profits or losses arising from intra-group transactions are eliminated in full on consolidation.

Changes in the Group's ownership interest in a subsidiary that do not result in the Group losing control are accounted for within the equity.

When the Group loses control of a subsidiary it derecognises the assets and liabilities and related equity components of the former subsidiary. Any gain or loss is recognised in the consolidated income statement. Any investment retained in the former subsidiary is measured at its fair value at the date when control is lost.

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#### **Associates**

An associate is an entity over which the Group exercises significant influence, but not control or joint control, through participation in financing and operating policy decisions, in which it normally owns between 20% and 50% of the voting equity. Associates are equity accounted for from the date significant influence commenced until the date that significant influence effectively ceased.

Investments in associates are carried at cost, including goodwill, as adjusted for the Group's share of post-acquisition changes in associate's retained earnings and other movements in reserves. The carrying value of investments in associates is reviewed on a regular basis and if any impairment in value has occurred, it is written down in the period in which these circumstances are identified. The results of associates are equity accounted for based on their most recent financial statements after any adjustments necessary to give effect to uniform accounting policies.

Losses of associates are recorded in the consolidated financial statements until the investment in such associates is written down to nil value. Thereafter losses are only accounted for to the extent that the Group is committed to provide financial support to such associates.

Profits and losses resulting from transactions with associates are eliminated to the extent of the Group's interest in the relevant associates. When significant influence over an associate is lost, any investment retained in the former associate is stated at fair value, with any consequential gain or loss recognised in the consolidated income statement.

#### **Business combinations**

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group at the date of acquisition in exchange for control of the acquiree.

Where an investment in a subsidiary or an associate is made, any excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the fair value of the identifiable assets acquired and the liabilities assumed at the acquisition date is recognised as goodwill. Goodwill in respect of subsidiaries is disclosed separately and goodwill relating to associates is included in the carrying value of the investment in associates. Goodwill is reviewed for impairment at least annually. If impairment has occurred, it is recognised in the consolidated income statement during the period in which the circumstances are identified and is not subsequently reversed.

If, after reassessment, the net amounts of the identifiable assets acquired and liabilities assumed at the acquisition date exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognised in the consolidated income statement immediately as a bargain purchase gain.

Acquisition-related costs are recognised in the consolidated income statement as incurred.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are retrospectively adjusted during the measurement period (a maximum of twelve months from the date of acquisition), or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

#### Assets classified as held for sale

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered primarily through a sale transaction rather than through continuing use. This condition is ordinarily regarded as met when sale is highly probable within one year from the date of classification and the asset or disposal group is available for immediate sale in its present condition and management has committed to the sale.

Non-current assets and disposal groups classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell.

Assets held for sale and related liabilities are presented in the consolidated statement of financial position separately from other assets and liabilities. Comparative information related to assets held for sale is not amended in the consolidated statement of financial position for the prior period.

#### **Functional and presentation currency**

 $The individual \ financial \ statements \ of each \ Group \ entity \ are \ presented \ in \ its \ functional \ currency.$ 

The Russian Rouble ("RUB") is the functional currency of the Company, all of its subsidiaries located in the Russian Federation and all foreign subsidiaries of the Group, except for the following subsidiaries operating with a significant degree of autonomy. The functional currency of Norilsk Nickel Harjavalta Oy is US Dollar, and the functional currency of Norilsk Nickel Africa Proprietary Limited is South African Rand.

The presentation currency of the consolidated financial statements of the Group is US Dollar ("USD"). Using USD as a presentation currency is common practice for global mining companies. In addition, USD is a more relevant presentation currency for international users of the consolidated financial statements of the Group. The Group also issues consolidated financial statements to comply with Law 208-FZ, which use the Russian Rouble as the presentation currency (refer to note 1).

The translation of components of the consolidated statement of financial position, consolidated income statement, consolidated statement of cash flows into presentation currency is made as follows:

- all assets and liabilities, both monetary and non-monetary, in the consolidated statement of financial position are translated at the closing exchange rates at the end of the respective reporting period;
- income and expense are translated at the average exchange rates for each quarter (unless this average rate is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in these cases income and expenses are translated at the dates
- all equity items are translated at the historical exchange rates at the dates of the transaction;
- all resulting exchange differences are recognised as a separate component in other comprehensive income; and
- in the consolidated statement of cash flows, cash balances at beginning and end of each period presented are translated at exchange rates
- all cash flows are translated at the average exchange rates for the periods presented with the exception of borrowings, dividends and advances received, gains and losses from disposal of subsidiaries, which are translated using the prevailing exchange rates at the dates of the transactions;
- resulting exchange differences are presented in the consolidated statement of cash flows as effects of foreign exchange differences on balances of cash and cash equivalents.

#### Foreign currency transactions

Transactions in currencies other than the entity's functional currency (foreign currencies) are recorded at the exchange rates prevailing at the date of transactions. All monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates prevailing at each reporting date. Non-monetary items carried at historical cost are translated at the exchange rates prevailing at the date of transactions. Non-monetary items carried at fair value are translated at the exchange rate prevailing at the date on which the most recent fair value was determined. Exchange differences arising from changes in exchange rates are recognised in the consolidated income statement.

Exchange rates used in the preparation of the consolidated financial statements were as follows:

	At 31 December 2016	At 31 December 2015
Russian Rouble/US Dollar		
31 December	60.66	72.88
Average for the year ended 31 December	67.03	60.96
South African Rand/US Dollar		
31 December	13.78	15.55
Average for the year ended 31 December	14.68	12.69
Australia Dollar/US Dollar		
31 December	1.39	1.37
Average for the year ended 31 December	1.34	1.33
Hong Kong Dollar/US Dollar		
31 December	7.75	7.75
Average for the year ended 31 December	7.76	7.75

#### Revenue recognition

#### Metal sales revenue

Revenue from metal sales is recognised when the significant risks and rewards of ownership are transferred to the buyer and represents invoiced value of all metal products shipped to customers, net of value added tax.

Revenue from contracts that are entered into and continue to meet the Group's expected sale requirements designated for that purpose at their inception, and are expected to be settled by physical delivery, are recognised in the consolidated financial statements as and when they are delivered.

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Certain contracts are provisionally priced so that price is not settled until a predetermined future date based on the market price at that time. Revenue from these transactions is initially recognised at the current market price. Provisionally priced metal sales are marked-to-market at each reporting date using the forward price for the period equivalent to that outlined in the contract. This mark-to-market adjustment is recorded in revenue.

#### Other revenue

Revenue from sale of goods, other than metals, is recognised when significant risks and rewards of ownership are transferred to the buyer in accordance with the shipping terms specified in the sales agreements.

Revenue from service contracts is recognised when the services are rendered and the outcome can be reliably measured.

#### Dividends and interest income

Dividends from investments are recognised when the Group's right to receive payment has been established. Interest income is accrued based on effective interest method

#### Leases

Leases under which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Assets subject to finance leases are capitalised as property, plant and equipment at the lower of fair value or present value of future minimum lease payments at the date of acquisition. Simultaneously, related lease obligation is recognised at the same value. Assets held under finance leases are depreciated over their estimated economic useful lives or over the term of the lease, if shorter. If there is reasonable certainty that the lessee will obtain ownership at the end of the lease term, the period of expected use is the useful life of the asset.

Finance lease payments are allocated using the effective interest rate method, between the lease finance cost, which is included in finance costs, and the capital repayment, which reduces the related lease obligation to the lessor.

Leases where the lessor retains substantially all the risks and benefits of ownership of the asset are classified as operating leases. Operating lease payments are recognised as an expense in the consolidated income statement on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating and finance leases are expensed in the period in which they are incurred.

#### Finance costs

Finance costs mostly comprise interest expense on borrowings and unwinding of discount on decommissioning obligations.

Finance costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time when the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

#### Government grants

Government grants are recognised when there is reasonable assurance that the grant will be received and all conditions and requirements attaching to the grant will be met. Government grants related to assets are deducted from the cost of these assets in arriving at their carrying value.

#### **Employee benefits**

Remuneration to employees in respect of services rendered during a reporting period is recognised as an expense in that period. Long term employee benefits obligations are discounted to net present value.

#### Defined contribution plans

The Group contributes to the following major defined contribution plans:

- Pension Fund of the Russian Federation;
- Mutual accumulated pension plan.

The only obligation of the Group with respect to these and other defined contribution plans is to make specified contributions in the period in which they arise. These contributions are recognised in the consolidated income statement when employees have rendered services entitling them to the contribution.

#### Income tax expense

Income tax expense represents the sum of the tax currently payable and deferred tax.

Income tax is recognised as an expense or income in the consolidated income statement, except when it relates to other items recognised directly in other comprehensive income, in which case the tax is also recognised directly in other comprehensive income. Where current or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

#### Current tax

Current tax is based on taxable profit for the year. Taxable profit differs from profit for the year as reported in the consolidated income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible.

#### Deferred tax

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in computation of taxable profit. Deferred tax liabilities are recognised for all taxable temporary differences, and deferred tax assets are recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such assets and liabilities are not recognised if a temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither taxable profit nor accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries, joint ventures and associates, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at each statement of financial position date and adjusted to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

The measurement of deferred tax liabilities and assets reflects the tax consequences of the manner in which the Group expects at the reporting date to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority. The Group offsets deferred tax assets and liabilities for the subsidiaries which entered into the tax consolidation group.

#### Property, plant and equipment and mine development costs

#### Minina assets

Mine development costs are capitalised and comprise expenditures directly related to:

- acquiring mining and exploration licences;
- developing new mining operations;
- estimating revised content of minerals in the existing ore bodies; and
- expanding capacity of a mine.

Mine development costs include interest capitalised during the construction period, when financed by borrowings.

Mine development costs are transferred to mining assets and start to be depreciated when a new mine reaches commercial production quantities.

Mining assets are recorded at cost less accumulated amortisation and impairment losses. Mining assets include cost of acquiring and developing mining properties, pre-production expenditure, mine infrastructure, plant and equipment that process extracted ore, mining and exploration licenses and present value of future decommissioning costs.

Depreciation of mining assets is charged from the date on which a new mine reaches commercial production quantities and is included in the cost of production. Carrying value of mining assets is depreciated on a straight-line basis over the lesser of their remaining economic useful lives or remaining life of mine that they relate to, calculated on the basis of the amount of proven and probable ore reserves. When determining the life of mine, assumptions valid at the time of estimation may change in case new information becomes available. Useful lives are in average varying from 2 to 45 years.

#### Non-mining assets

Non-mining assets include metallurgical processing plants, buildings, infrastructure, machinery and equipment and other non-mining assets. Non-mining assets are stated at cost less accumulated depreciation and impairment losses.

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Non-mining assets are depreciated on a straight-line basis over their economic useful lives.

Depreciation is calculated over the following economic useful lives:

buildings, structures and utilities 5 – 50 years
 machinery, equipment and transport 3 – 30 years
 other non-mining assets 2 – 20 years

#### Capital construction-in-progress

Capital construction-in-progress comprises costs directly related to construction of buildings, processing plant, infrastructure, machinery and equipment, including:

- advances given for purchases of property, plant and equipment and materials acquired for construction of buildings, processing plant, infrastructure, machinery and equipment;
- irrevocable letters of credit opened for future fixed assets deliveries and secured with deposits placed in banks;
- finance charges capitalised during construction period where such costs are financed by borrowings.

Depreciation of these assets commences when the assets are put into production.

#### Research and exploration expenditure

Research and exploration expenditure, including geophysical, topographical, geological and similar types of expenditure, is capitalised, if it is deemed that such expenditure will lead to an economically viable capital project, and begins to be amortised over the life of mine, when commercial viability of the project is proved. Otherwise it is expensed in the period in which it is incurred.

Research and exploration expenditure written-off before development and construction starts is not subsequently capitalised, even if a commercial discovery subsequently occurs.

#### **Investment property**

Investment property recognised at historical cost less accumulated depreciation. Investment property is depreciated on a straignt-line basis.

#### Intangible assets, excluding goodwill

Intangible assets are recorded at cost less accumulated amortisation and impairment losses. Intangible assets mainly include patents, licences, software and rights to use software and other intangible assets.

Amortisation of patents, licenses and software is charged on a straight-line basis over 1 – 10 years.

#### Impairment of tangible and intangible assets, excluding goodwill

At each reporting date, the Group analyses the triggers of impairment of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not practical to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less cost to sell and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or cash-generating unit. If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised in the consolidated income statement immediately.

Where an impairment loss subsequently reversed, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but only to the extent that the increased carrying amount does not exceed the original carrying amount that would have been determined had no impairment loss been recognised in prior periods. A reversal of an impairment loss is recognised in the consolidated income statement.

#### Inventories

#### Refined metals

Main produced metals include nickel, copper, palladium, platinum; by-products include gold, rhodium, silver and other minor metals. Main products are measured at the lower of net cost of production or net realisable value. The net cost of production of main products is determined as total production cost, allocated to each joint product by reference to their relative sales value. By-products are measured at net realisable value, through a mark-to-market valuation.

#### Work-in-process

Work-in-process includes all costs incurred in the normal course of business including direct material and direct labour costs and allocation of production overheads, depreciation and amortisation and other costs, incurred for producing each product, given its stage of completion.

#### Materials and supplies

Materials and supplies are valued at the weighted average cost less provision for obsolete and slow-moving items.

#### Financial assets

Financial assets are recognised when the Group has become a party to the contractual arrangement of the instrument and are initially measured at fair value, plus transaction costs, except for those financial assets classified as at fair value through profit or loss, which are initially measured at fair value.

Financial assets are classified into the following specified categories:

- financial assets at fair value through profit or loss
- held-to-maturity investments;
- available-for-sale financial assets; and
- loans and receivables.

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

#### Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including transaction costs and other premiums or discounts) through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest basis for debt securities other than those financial assets designated as at fair value through profit or loss.

#### Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss where the financial asset is either held for trading or it is designated as at fair value through profit or loss.

A financial asset is classified as held for trading if:

- it has been acquired principally for the purpose of selling in the near future; or
- it is a part of an identified portfolio of financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative.

Financial assets at fair value through profit or loss are stated at fair value, with any resultant gain or loss recognised in the consolidated income statement. The net gain or loss recognised in the consolidated income statement incorporates any dividend or interest earned on the financial asset.

#### Loans and receivables

Trade receivables, loans, and other receivables that have fixed or determinable payments which are not quoted in an active market are classified as loans and receivables. Loans and receivables are measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial.

#### Available-for-sale financial assets

Available-for-sale financial assets mainly include investments in listed and unlisted equity securities, that are not classified in other categories.

Listed equity securities held by the Group that are traded in an active market are measured at their market value. Gains and losses arising from changes in fair value are recognised in other comprehensive income in the investments revaluation reserve with the exception of impairment losses, interest calculated using the effective interest method and foreign exchange gains and losses on monetary assets, which are recognised directly in the consolidated income statement. Where an investment is disposed of or is determined to be impaired, the cumulative gain or loss previously recognised in the investment revaluation reserve is included in the consolidated income statement for the period.

Investments in unlisted equity securities that do not have a quoted market price in an active market are recorded at management's estimate of fair value.

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#### Impairment of financial assets

Financial assets, other than those at fair value through profit or loss, are assessed for indicators of impairment at each statement of financial position date. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been negatively impacted.

The Group has fully provided for all trade and other receivables which were due in excess of 365 days. Trade and other receivables that are past due for less than 365 days are provided according to expected probability of repayment and the length of the overdue period.

Objective evidence of impairment for a accounts receivable could include the Group's past experience of collecting payments, an increase in the number of delayed payments as well as observable changes in economic conditions that correlate with defaults on receivables.

For financial assets carried at amortised cost, the amount of the impairment is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade and other receivables, where the carrying amount is reduced through the use of an provision for doubtful debts. When trade and other receivables are considered uncollectible, it is written off against the provision. Subsequent recoveries of amounts previously written off are credited against the provision. Changes in the provision are recognised in the consolidated income statement.

With the exception of available-for-sale debt and equity instruments, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through the consolidated income statement to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

When a decline in fair value of an available-for-sale investment has been recognised in other comprehensive income and there is objective evidence that investment is impaired, the cumulative loss that had been recognised in other comprehensive income is reclassified from other comprehensive income and recognised in the consolidated income statement even though the investment has not been derecognised. Impairment losses previously recognised through consolidated income statement are not reversed. Any increase in fair value subsequent to an impairment loss is recognised in other comprehensive income.

#### Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire; or it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

#### Financial liabilities

The Group classifies financial liabilities into loans and borrowings, trade and other payables. Such financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest method.

#### Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or where appropriate, a shorter period.

#### Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or they expire.

#### Cash and cash equivalents

Cash and cash equivalents comprise cash balances, cash deposits in banks, brokers and other financial institutions and highly liquid investments with original maturities of three months or less and on demand deposits, which are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

#### **Provisions**

Provisions are recognised when the Group has a legal or constructive obligation as a result of past events for which it is probable that an outflow of economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

#### **Decommissioning obligations**

Decommissioning obligations include direct asset decommissioning costs as well as related land restoration costs.

Future decommissioning and other related obligations, discounted to net present value, are recognised at the moment when the legal or constructive obligation in relation to such costs arises (generally when the related asset is put into operation) and the future cost can be reliably estimated. This cost is capitalised as part of the initial cost of the related asset (i.e. a mine) and is depreciated over the useful life of the asset. The unwinding of the discount on decommissioning obligations is included in the consolidated income statement as finance costs. Decommissioning obligations are periodically reviewed in light of current laws and regulations, and adjustments are made as necessary.

#### 4. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCE OF ESTIMATION UNCERTAINTY

Preparation of the consolidated financial statements in accordance with IFRS requires the Group's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. The determination of estimates requires judgements which are based on historical experience, current and expected economic conditions, and all other available information. Actual results could differ from these estimates.

The most significant areas requiring the use of management estimates and assumptions relate to:

- useful economic lives of property, plant and equipment;
- impairment of assets, including fair value of assets held for sale;
- provisions;
- decommissioning obligations;
- income taxes: and
- contingencies.

#### Useful economic lives of property, plant and equipment

Carrying value of the Group's mining assets, classified within property, plant and equipment, is amortised on a straight-line basis over the lesser of their remaining economic useful lives or remaining life of mine. When determining the life of a mine, valid assumptions at the time of estimation may change in case of new information becomes available.

The factors that could affect the estimation of the life of mine include the following:

- changes in proved and probable ore reserves;
- the grade of mineral reserves varying significantly from time to time;
- differences between actual commodity prices and commodity price assumptions used in the estimation and classification of ore reserves;
- unforeseen operational issues at mine sites; and
- changes in capital, operating, mining, processing and decommissioning costs, discount rates and foreign exchange rates could possibly adversely affect
  the economic viability of ore reserves.

Any of these changes could affect prospective amortisation of mining assets and their carrying value. Useful economic lives of non-mining property, plant and equipment are reviewed by management periodically. The review is based on the current condition of the assets and the estimated period during which they will continue to bring economic benefit to the Group.

#### Impairment of assets

The Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets are impaired or indication of reversal of impairment. In making the assessment for impairment, assets that do not generate independent cash flows are allocated to an appropriate cash-generating unit. Management necessarily applies its judgement in allocating assets that do not generate independent cash flows to appropriate cash-generating units, and also in estimating the timing and value of the underlying cash flows within the value-in-use calculation. Subsequent changes to the cash-generating unit allocation or to the timing of cash flows could impact the carrying value of the respective assets.

#### **Provisions**

The Group creates provision for doubtful debts to account for estimated losses resulting from the inability of customers to make the required payments. When evaluating the adequacy of a provision for doubtful debts, management bases its estimate on current overall economic conditions, ageing of the accounts receivable balances, historical write-off experience, customer creditworthiness and changes in payment terms. Changes in the economy, industry or specific customer conditions may require adjustments to the provision for doubtful debts recorded in the consolidated financial statements.

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The Group also creates a provision for obsolete and slow-moving raw materials and supplies. In addition, certain finished goods of the Group are carried at net realisable value. Estimates of net realisable value of inventories are based on the most reliable evidence available at the time the estimates are made. These estimates take into consideration fluctuations of price or cost directly relating to events occurring subsequent to the statement of financial position date to the extent that such events confirm conditions existing at the end of the period.

The Group creates a provision for social commitments. The provision represents present value of the best estimate of the future outflow of economic benefits to settle these obligations.

#### **Decommissioning obligations**

The Group's mining and exploration activities are subject to various environmental laws and regulations. The Group estimates decommissioning obligations based on management's understanding of the current legal requirements in the various jurisdictions in which it operates, terms of the license agreements and internally generated engineering estimates. Provision is made, based on net present values, for decommissioning and land restoration costs as soon as the obligation arises. Actual costs incurred in future periods could differ materially from the amounts provided. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates could affect the carrying amount of this provision.

#### Income taxes

The Group is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining provision for income taxes due to the complexity of legislation in some jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Group recognises provisions for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Deferred tax assets are reviewed at each statement of financial position date and adjusted to the extent that it is probable that sufficient taxable income will be available to allow all or part of the deferred tax asset to be utilised. The estimation of that probability includes judgements based on the expected performance.

Various factors are considered to assess the probability of the future utilisation of deferred tax assets, including past operating results, operational plans, expiration of tax losses carried forward, and tax planning strategies. If actual results differ from these estimates or if these estimates must be adjusted in future periods, the financial position, results of operations and cash flows may be affected.

#### Contingencies

By their nature, contingencies will only be resolved when one or more future events occur or fail to occur. The assessment of such contingencies inherently involves the exercise of significant judgement and estimates of the outcome of future events.

#### 5. SEGMENTAL INFORMATION

Operating segments are identified on the basis of internal reports on components of the Group that are regularly reviewed by the Management Board.

Management has determined the following operating segments:

- "GMK Group" segment, which includes mining and metallurgy operations, transport services, energy, repair and maintenance services located at Taimyr Peninsula:
- "Group KGMK" segment, which includes mining and metallurgy operations, energy, exploration activities located at Kola Peninsula;
- "NN Harjavalta" segment, which includes refinery operations located in Finland;
- "Other metallurgical" segment, which includes operations of Bystrinskoye project, other metallurgy operations and exploration activities located in Russia and abroad;
- "Other non-metallurgical" segment, which includes metal and other trading, supply chain management, transport services, energy and utility, research and other activities located in Russia and abroad.

Corporate activities of the Group do not represent an operating segment, include primarily headquarters' general and administrative expenses and treasury operations of the Group and are presented as "Unallocated", together with assets classified as held for sale and liabilities associated with assets classified as held for sale.

The amounts in respect of reportable segments in the disclosure below are stated before intersegment eliminations, excluding:

- balances of intercompany loans and borrowings and interest accruals;
- intercompany investments;
- accrual of intercompany dividends;
- intercompany metal sales.

Amounts are measured on the same basis as those in the consolidated financial statements. Information for the year ended 31 December 2015 has been presented to conform with the current year presentation.

The following tables present revenue, measure of segment profit or loss (EBITDA) and other segmental information from continuing operations regarding the Group's reportable segments for the years ended 31 December 2016 and 31 December 2015, respectively.

For the year ended 31 December 2016	GMK Group	Group KGMK	NN Harjavalta	Other metallurgical	Other non- metallurgical	Eliminations	Total
Revenue from external customers	5,981	465	727	7	1,079	-	8,259
Inter-segment revenue	213	199	_	_	620	(1,032)	-
Total revenue	6,194	664	727	7	1,699	(1,032)	8,259
Segment EBITDA	3,883	117	45	(11)	119	112	4,265
Unallocated							(366)
Consolidated EBITDA							3,899
Depreciation and amortisation							(557)
Impairment of non-financial assets							(61)
Finance costs							(453)
Foreign exchange gain, net							485
Other income and expenses, net							(37)
Profit before tax							3,276
Other segmental information							
Purchase of property, plant and equipment and intangible assets	1,284	93	16	269	33	-	1,695
Depreciation and amortisation	435	41	28	-	23	30	557
Impairment of non-financial assets	50	2	_	_	9	-	61
For the year ended 31 December 2015	GMK Group	Group KGMK	NN Harjavalta	Other metallurgical	Other non- metallurgical	Eliminations	Total
Revenue from external customers	6,532	615	757	17	621	-	8,542
Inter-segment revenue	58	158	_	13	561	(790)	_
Total revenue	6,590	773	757	30	1,182	(790)	8,542
Segment EBITDA	4,429	257	63	(12)	(81)	26	4,682
Unallocated							
Consolidated EBITDA							(386)
Depreciation and amortisation							(386) 4,296
							. , ,
Impairment of property, plant and equipment							4,296
· · · · · · · · · · · · · · · · · · ·							4,296
equipment							4,296 (506) (284)
equipment Finance costs							4,296 (506) (284) (326)
equipment  Finance costs  Foreign exchange loss, net							4,296 (506) (284) (326) (865)
equipment  Finance costs  Foreign exchange loss, net  Other income and expenses, net							(506) (284) (326) (865) (71)
equipment  Finance costs  Foreign exchange loss, net  Other income and expenses, net  Profit before tax	1,353	146	24	100	31		(506) (284) (326) (865) (71)
equipment  Finance costs  Foreign exchange loss, net  Other income and expenses, net  Profit before tax  Other segmental information  Purchase of property, plant and equipment	1,353 418	146	24	100	31 34	- (26)	4,296 (506) (284) (326) (865) (71) 2,244

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The following tables present assets and liabilities of the Group's operating segments at 31 December 2016 and 31 December 2015, respectively.

			-				
At 31 December 2016	GMK Group	Group KGMK	NN Harjavalta	Other metallurgical	Other non- metallurgical	Eliminations	Total
Inter-segment assets	296	79	160	15	49	(599)	-
Segment assets	9,922	768	383	802	793	(111)	12,557
Total segment assets	10,218	847	543	817	842	(710)	12,557
Unallocated							3,900
Total assets							16,457
Inter-segment liabilities	113	87	77	27	295	(599)	_
Segment liabilities	2,241	113	102	200	862	-	3,518
Total segment liabilities	2,354	200	179	227	1,157	(599)	3,518
Unallocated							9,043
Total liabilities							12,561
At 31 December 2015	GMK Group	Group KGMK	NN Harjavalta	Other metallurgical	Other non- metallurgical	Eliminations	Total
At 31 December 2015  Inter-segment assets	GMK Group	Group KGMK	NN Harjavalta	Other metallurgical 23	Other non- metallurgical	Eliminations (722)	Total —
		·		metallurgical	metallurgical		Total – 8,936
Inter-segment assets	344	90	128	metallurgical 23	metallurgical	(722)	-
Inter-segment assets Segment assets	344 6,949	90	128 346	metallurgical 23 317	metallurgical 137 985	(722) (171)	- 8,936
Inter-segment assets Segment assets Total segment assets	344 6,949	90	128 346	metallurgical 23 317	metallurgical 137 985	(722) (171)	- 8,936 8,936
Inter-segment assets Segment assets Total segment assets Unallocated	344 6,949	90	128 346	metallurgical 23 317	metallurgical 137 985	(722) (171)	- 8,936 8,936 4,435
Inter-segment assets Segment assets Total segment assets Unallocated Total assets	344 6,949 7,293	90 510 600	128 346 474	metallurgical 23 317 340	metallurgical 137 985 1,122	(722) (171) (893)	- 8,936 8,936 4,435
Inter-segment assets Segment assets Total segment assets Unallocated Total assets Inter-segment liabilities	344 6,949 7,293	90 510 600	128 346 474	metallurgical 23 317 340	metallurgical 137 985 1,122	(722) (171) (893)	- 8,936 8,936 4,435 13,371
Inter-segment assets Segment assets Total segment assets Unallocated Total assets Inter-segment liabilities Segment liabilities	344 6,949 7,293 178 1,020	90 510 600	128 346 474	metallurgical 23 317 340 4 157	metallurgical 137 985 1,122 522 740	(722) (171) (893) (722)	- 8,936 8,936 4,435 13,371 - 2,064
Inter-segment assets Segment assets Total segment assets Unallocated Total assets Inter-segment liabilities Segment liabilities Total segment liabilities	344 6,949 7,293 178 1,020	90 510 600	128 346 474	metallurgical 23 317 340 4 157	metallurgical 137 985 1,122 522 740	(722) (171) (893) (722)	- 8,936 8,936 4,435 13,371 - 2,064 2,064

The Group's non-current assets are primarily located in the Russian Federation and Finland.

# 6. METAL SALES

 $The \ Group's \ metal \ sales \ to \ external \ customers \ are \ detailed \ below \ (based \ on \ external \ customers' \ locations):$ 

	Total	Nickel	Copper	Palladium	Platinum	Semi-products	Other metals
For the year ended 31 December 2016							
Europe	4,394	1,143	1,544	821	420	123	343
Asia	1,723	1,104	1	478	26	92	22
North and South America	737	222	_	488	_	1	26
Russian Federation and CIS	792	156	294	101	208	_	33
	7,646	2,625	1,839	1,888	654	216	424
For the year ended 31 December 2015							
Europe	4,698	1,453	1,448	1,182	327	72	216
Asia	2,110	1,153	249	384	180	109	35
North America	613	232	22	209	76	12	62
Russian Federation and CIS	462	172	197	32	48	_	13
	7,883	3,010	1,916	1,807	631	193	326

# 7. COST OF METAL SALES

	For the year ended 31 December 2016	For the year ended 31 December 2015
Cash operating costs		
Labour	1,145	1,131
Purchases of metals for resale, raw materials and semi-products	555	718
Materials and supplies	520	459
Third party services	170	186
Mineral extraction tax and other levies	122	128
Electricity and heat energy	101	108
Transportation expenses	89	75
Fuel	60	66
Sundry costs	143	126
Total cash operating costs	2,905	2,997
Depreciation and amortisation	456	476
Decrease/(increase) in metal inventories	290	(308)
Total	3,651	3,165

# 8. SELLING AND DISTRIBUTION EXPENSES

	For the year ended 31 December 2016	
Export duties	61	78
Staff costs	13	19
Marketing expenses	7	15
Transportation expenses	5	8
Other	7	9
Total	93	129

# 9. GENERAL AND ADMINISTRATIVE EXPENSES

	For the year ended 31 December 2016	
Staff costs	376	352
Taxes other than mineral extraction tax and income tax	58	54
Third party services	55	55
Depreciation and amortisation	20	19
Rent expenses	19	19
Transportation expenses	6	4
Other	47	51
Total	581	554

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# 10. OTHER NET OPERATING EXPENSES

	For the year ended 31 December 2016	
Social expenses	111	114
Change in provision for reconfiguration of production facilities	(33)	116
Change in allowance for doubtful debts	14	(3)
Change in allowance for obsolete and slow-moving inventory	(2)	5
Change in allowance for value added tax recoverable	2	4
Other	(8)	52
Total	84	288

# 11. FINANCE COSTS

	For the year ended 31 December 2016	
Interest expense on borrowings net of amounts capitalised	403	281
Unwinding of discount on provisions	46	44
Other	4	1
Total	453	326

# 12. INCOME FROM INVESTMENTS, NET

	For the year ended 31 December 2016	
Interest income on bank deposits	78	107
Realised gain on disposal of investments	4	75
Other	32	33
Total	114	215

# 13. INCOME TAX EXPENSE

	For the year ended 31 December 2016	
Current income tax expense	686	506
Deferred tax expense	59	22
Total	745	528

Additional Information

A reconciliation of theoretic income tax, calculated at the statutory rate in the Russian Federation, the location of major production assets of the Group, to the amount of actual income tax expense recorded in the consolidated income statement is as follows:

	For the year ended 31 December 2016	For the year ended 31 December 2015
Profit before tax	3,276	2,244
Income tax at statutory rate of 20%	655	449
Allowance for deferred tax assets	18	18
Non-deductible impairment of financial and non-financial assets	41	53
Utilisation of previously unrecognised deferred tax asset	-	(96)
Non-taxable gain from disposal of financial assets	-	(14)
Non-deductible loss from disposal of assets held for sale	-	59
Non-deductible social expenses	31	32
Effect of different tax rates of subsidiaries operating in other jurisdictions	(27)	37
Tax effect of other permanent differences	27	(10)
Total	745	528

The corporate income tax rates in other countries where the Group has a taxable presence vary from 0% to 40%.

#### Deferred tax balances

	At 31 December 2015	Recognised in income statement	Classified as held for sale	Effect of translation to presentation currency	At 31 December 2016
Property, plant and equipment	201	58	-	41	300
Inventories	92	(6)	-	17	103
Trade and other receivables	(8)	(2)	-	(4)	(14)
Decommissioning	(61)	(4)	-	(13)	(78)
Loans and borrowings, trade and other payables	(16)	(9)	-	(8)	(33)
Other assets	(9)	(2)	-	2	(9)
Other liabilities	5	-	-	2	7
Tax loss carried forward	(41)	24	-	(12)	(29)
Net deferred tax liabilities	163	59	-	25	247

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	At 31 December 2014	Recognised in income statement	Classified as held for sale	Effect of translation to presentation currency	At 31 December 2015
Property, plant and equipment	228	24	-	(51)	201
Inventories	39	73	-	(20)	92
Trade and other receivables	(9)	(1)	-	2	(8)
Decommissioning obligations	(56)	(20)	-	15	(61)
Loans and borrowings, trade and other payables	(5)	(16)	-	5	(16)
Other assets	(15)	(1)	-	7	(9)
Other liabilities	+	10	-	(5)	5
Tax loss carried forward	(19)	(47)	10	15	(41)
Net deferred tax liabilities	163	22	10	(32)	163

Certain deferred tax assets and liabilities have been offset to the extent they relate to taxes levied on the Group's entities which entered into the tax consolidation group. Deferred tax balances (after offset) presented in the consolidated statement of financial position were as follows:

	At 31 December 2016	At 31 December 2015
Deferred tax liability	303	205
Deferred tax asset	(56)	(42)
Net deferred tax liabilities	247	163

#### Unrecognised deferred tax assets

Deferred tax assets have not been recognised as follows:

	At 31 December 2016	At 31 December 2015
Deductible temporary differences	90	78
Tax loss carry-forwards	214	187
Total	304	265

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

At 31 December 2016 deferred tax asset in amount of USD 166 million related to tax loss arising on disposal of OJSC "Third Generation Company of the Wholesale Electricity Market" ("OGK-3") (31 December 2015: USD 138 million) was not recognised as it was incurred by the Company prior to setting up of the tax consolidation group. This deferred tax asset can be utilized only if the Company exits the tax consolidation group without expiry (2015: within nine years after the exit).

Unrecognised deferred tax assets in the amount of USD 48 million related to other tax losses will not expire and can be utilized according to specific rules stated by art. 283 of the Tax code of the Russian Federation (31 December 2015: USD 49 million – expire in ten years).

During the year ended 31 December 2015 previously unrecognised deferred tax assets arising on an impairment of available-for-sale investments in securities in amount of USD 96 million was utilised, following the changes in tax legislation.

At 31 December 2016, the Group did not recognise a deferred tax liability in respect of taxable temporary differences of USD 1,104 million (31 December 2015: USD 1,191 million) associated with investments in subsidiaries, because management believes that it is in a position to control the timing of reversal of such differences and does not expect its reversal in foreseeable future.

14. PROPERTY, PLANT AN	DEQUIPMENT					
	Minima assats and				Non-mining assets	
	Mining assets and mine development cost	Buildings, structures and utilities	Machinery, equipment and transport	Other	Capital construction- in-progress	Total
Cost						
Balance at 1 January 2015	5,042	2,222	2,850	5	1,276	11,395
Additions	1,032	_	-	-	832	1,864
Reclassified between groups	39	(2)	(101)	89	(25)	-
Transfers	-	165	234	10	(409)	-
Change in decommissioning provision	63	25	-	-	-	88
Reclassified from assets held for sale	104	(3)	(2)	30	9	138
Reclassified to investment property	_	(8)	(2)	(2)	_	(12)
Disposals	(106)	(10)	(73)	(2)	(17)	(208)
Effect of translation to presentation currency	(1,299)	(506)	(587)	(28)	(358)	(2,778)
Balance at 31 December 2015	4,875	1,883	2,319	102	1,308	10,487
Additions	1,214	_	-	-	673	1,887
Reclassified between groups	(49)	7	(37)	26	53	_
Transfers	_	450	363	58	(871)	
Change in decommissioning provision	(18)	5	_	_	-	(13)
Disposals	(58)	(11)	(100)	(7)	(31)	(207)
Effect of translation to presentation currency	1,077	379	431	30	256	2,173
Balance at 31 December 2016	7,041	2,713	2,976	209	1,388	14,327
Accumulated depreciation and impai	rment					
Balance at 1 January 2015	(1,742)	(977)	(1,527)	(1)	(137)	(4,384)
Charge for the year	(180)	(150)	(222)	(8)	_	(560)
Reclassified between groups	(32)	(5)	86	(49)	_	_
Reclassified from assets held for sale	(83)	2	5	_	(12)	(88)
Disposals	98	7	67	2	14	188
Impairment loss	(7)	(124)	(8)	-	(145)	(284)
Effect of translation to presentation currency	428	235	322	12	36	1,033
Balance at 31 December 2015	(1,518)	(1,012)	(1,277)	(44)	(244)	(4,095)
Charge for the year	(213)	(91)	(201)	(14)	_	(519)
Reclassified between groups	(11)	2	14	(5)	_	_
Disposals	46	7	90	3	19	165
Impairment loss	(7)	(70)	(2)	_	18	(61)
Effect of translation to presentation currency	(309)	(209)	(242)	(10)	(41)	(811)
Balance at 31 December 2016	(2,012)	(1,373)	(1,618)	(70)	(248)	(5,321)
Carrying value						
At 31 December 2015	3,357	871	1,042	58	1,064	6,392
At 31 December 2016	5,029	1,340	1,358	139	1,140	9,006

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At 31 December 2016 capital construction-in-progress included USD 87 million of irrevocable letters of credit opened for fixed assets purchases (31 December 2015: USD 107 million), representing security deposits placed in banks. For the year ended 31 December 2016 purchases of property, plant and equipment in the consolidated statement of cash flows include USD 78 million related to these irrevocable letters of credit (for the year ended 31 December 2015: USD 103 million).

Capitalised borrowing costs for the year ended 31 December 2016 amounted to USD 202 million (for the year ended 31 December 2015: USD 153 million). Capitalisation rate used to determine the amount of borrowing costs equals to 6.59% per annum (2015: 5.14%).

At 31 December 2016 mining assets and mine development cost included USD 2,994 million of mining assets under development (31 December 2015: USD 2,026 million).

#### **Impairment**

During the year ended 31 December 2015 the Group revised its intention on the further use of the gas extraction assets. As a result, these assets were assessed as a separate cash generating unit. At 31 December 2015 the Group identified indicators of the impairment of gas production assets and determined their recoverable amount based on the value-in-use estimate. As a result, impairment loss in the amount of USD 266 million was recognised in Impairment of non-financial assets in the consolidated income statement.

At 31 December 2016 indicators of additional impairment of gas production assets have been identified. The most significant estimates and assumptions used in determination of value in use are as follows:

- Future cash flows were projected based on budgeted amounts, taking into account actual results for the previous years. Forecasts were assessed
  up to 2100. Measurements were performed based on discounted cash flows expected to be generated by gas production assets.
- Management estimates prices for natural gas and gas concentrate based on commodities price forecasts. Commodities price forecast was based on consensus forecast.
- Production forecasts were primarily based on internal production reports available at the date of impairment test and management's assumptions
  regarding future production levels.
- The amounts and timing of capital investments were based on management's forecast.
- Inflation indices and foreign currency rate forecasts were sourced from Economist Intelligence Unit report. Inflation used was projected within 4-6%.
   Forecast for exchange rates was made based on expected RUR and USD inflation indices.
- A pre-tax nominal RUR discount rate of 17.4% was estimated by the reference to the weighted average cost of capital for the Group and reflects
  management's estimates of the risks specific to production units.

As a result, impairment loss in the amount of USD 50 million was recognised in Impairment of non-financial assets in the consolidated income statement.

During the year ended 31 December 2016 additional impairment losses in the amount of USD 11 million (for the year ended 31 December 2015: USD 18 million) were recognised in respect of specific individual assets, primarily non-mining assets.

#### **15. INVESTMENT PROPERTY**

At 31 December 2016 investment property is recognised in the consolidated statement of financial position at historical cost less accumulated depreciation in the amount of USD 93 million (31 December 2015: USD 83 million). Carrying value of investment property approximates to its fair value.

#### 16. OTHER FINANCIAL ASSETS

	At 31 December 2016	At 31 December 2015
Non-current		
Loans issued and other receivables	173	57
Bank deposits	10	5
Available-for-sale investments	4	-
Total non-current	187	62
Current		
Loans issued and other receivables	6	1
Derivative financial instruments	2	_
Total current	8	1

# During the year ended 31 December 2016, the Group fully impaired an interest in a related party which owns various real estate properties. Impairment loss was recognised in the consolidated income statement.

During the year ended 31 December 2015 the Group sold its 12.35% stake in PJSC Inter RAO for the total consideration in the amount of USD 204 million. Gain on disposal in the amount of USD 75 million was recognised in the consolidated income statement.

#### **Bank deposits**

Interest rate on long-term RUB-denominated deposits held in banks was 5.10% (31 December 2015: 5.10%) per annum.

#### 17. OTHER TAXES

	At 31 December 2016	At 31 December 2015
Taxes receivable		
Value added tax recoverable	242	186
Other taxes	36	14
	278	200
Less: Allowance for value added tax recoverable	_	(1)
Total	278	199
Less: Non-current portion of other taxes receivable	(2)	-
Other taxes receivable	276	199
Taxes payable		
Value added tax	70	45
Social security contributions	27	23
Property tax	18	10
Mineral extraction tax	11	7
Other	12	10
Other taxes payable	138	95

#### 18. INVENTORIES

	At 31 December 2016	At 31 December 2015
Refined metals	310	541
Work-in-process	894	663
Total metal inventories	1,204	1,204
Materials and supplies	718	520
Less: Allowance for obsolete and slow-moving items	(27)	(26)
Net materials and supplies	691	494
Inventories	1,895	1,698

In December 2016 the Group acquired metal semi-products stock of USD 891 million. Part of metal semi-products stock in the amount of USD 810 million was presented in other non-current assets according to production plans. Accounts payable were recognised at fair value using market discount rate in accordance with four-year maturity. Part of accounts payable was presented in trade and other long-term payables according to maturity profiles of liabilities.

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#### 19. TRADE AND OTHER RECEIVABLES

	At 31 December 2016	At 31 December 2015
Trade receivables from metal sales	95	86
Other receivables	156	135
	251	221
Less: Allowance for doubtful debts	(81)	(54)
Trade and other receivables, net	170	167

In 2016 and 2015, the average credit period on metal sales varied from 0 to 30 days. Trade receivables are generally non-interest bearing.

At 31 December 2016 and 2015, there were no material trade accounts receivable which were overdue or individually determined to be impaired.

The average credit period on sales of other products and services for the year ended 31 December 2016 was 32 days (2015: 27 days). No interest was charged on these receivables.

Included in the Group's other receivables at 31 December 2016, were debtors with a carrying value of USD 45 million (31 December 2015: USD 45 million) that were past due but not impaired. Management of the Group believes that these amounts are recoverable in full.

The Group did not hold any collateral for accounts receivable balances.

Ageing of other receivables past due but not impaired was as follows:

	At 31 December 2016	At 31 December 2015
Less than 180 days	41	34
180-365 days	4	11
	45	45

#### Movement in the allowance for doubtful debts was as follows:

	At 31 December 2016	At 31 December 2015
Balance at beginning of the year	54	92
Change in allowance	14	(3)
Accounts receivable written-off	(2)	(16)
Effect of translation to presentation currency	15	(19)
Balance at end of the year	81	54

#### 20. CASH AND CASH EQUIVALENTS

	At 31 December 2016	At 31 December 2015
Current accounts		
foreign currencies	372	525
° RUB	58	43
Bank deposits		
foreign currencies	1,739	2,598
° RUB	1,119	879
Other cash and cash equivalents	13	9
Total	3,301	4,054

In December 2013, the Group made a decision to dispose of the following assets:

- Nkomati Nickel Mine, a South Africa mining company, an associate of the Group;
- assets located in Western Australia;
- certain other non-core assets located in the Russian Federation.

During the year ended 31 December 2014, management of the Group made a decision to dispose of Tati Nickel Mining Company ("TNMC"), a subsidiary of the Group, located in Botswana.

During the year ended 31 December 2015, management of the Group made a decision to dispose of OJSC "Arkhangelsk Sea Commercial Port", a subsidiary of the Group located in the Russian Federation.

During the year ended 31 December 2015, management of the Group made a decision to reclassify certain other non-core assets located in the Russian Federation from assets classified as held for sale to investment property (refer to note 15) or to the assets classified as held for use. Reclassification does not have significant effect on operations of the Group.

All of the above assets have been measured at the lower of their fair values less costs to sell and their carrying values. The Group has assessed fair value of assets classified as held for sale at 31 December 2015 based on price offers available.

Management of the Group concluded that the sale of assets in South Africa and disposal of other assets classified as held for sale referred to above does not constitute discontinued operations.

At 31 December 2016 and 31 December 2015 aggregate net assets included:

	At 31 December 2016	At 31 December 2015
Property, plant and equipment	-	7
Investments in associates	177	154
Deferred tax assets	9	10
Trade and other receivables	-	3
Other financial assets	_	1
Cash and cash equivalents	20	42
Total assets	206	217
Deferred tax liabilities	-	(1)
Employee benefit obligations	(1)	(1)
Loans and borrowings	-	(21)
Trade and other payables	(1)	(1)
Total liabilities	(2)	(24)
Net assets	204	193

On 17 October 2014, the Group entered into binding agreements to sell its assets in South Africa, comprising its 50% participation interest in Nkomati Nickel Mine ("Nkomati") and its 85% stake in Tati Nickel Mining Company (together "African assets") to BCL Investments ("BCL"). The total consideration for the assets amounts to USD 337 million subject to certain adjustments under agreement. Under the terms of the agreements, the buyers will assume all attributable decommissioning rehabilitation obligations related to the assets.

On 2 April 2015, the Group sold its 85% stake in TNMC. The carrying value of the Group's share in net assets including decommissioning obligations at the date of disposal was negative in the amount of USD 20 million. Financial result from the disposal includes the negative impact due to write down of the historical amount of the foreign currency translation reserve representing cumulative exchange differences between the presentation currency – the US dollar and the Botswana Pula.

Finalisation of sale of Nkomati was subject to completion of conditions precedent, which was achieved in September 2016. However, BCL failed to meet its obligations according to the agreement and was put into a voluntary liquidation. The Group has filed legal claims against BCL in Botswana and LCIA to enforce sale of Nkomati. Notwithstanding these circumstances management actively pursues its interests under the agreement and believes Nkomati should be classified as held for sale as of 31 December 2016.

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As at 31 December 2016, the Group accounts for Nkomati at the lower of its carrying value or fair value less cost to sell. The fair value less cost to sell was determined by the Group using a discounted cash flow model approach. Based on the results of discounted cash flows analysis the Group didn't recognize any impairment of Nkomati as of 31 December 2016.

The discounted cash flow model is particularly sensitive to the following inputs:

- Increase in discount rate by 2 p.p. up to 10.8% real rate for ZAR will lead to impairment recognition amounting to USD 19 million;
- Decrease in sale price on metals by 2% will lead to impairment recognition amounting to USD 14 million.

On 29 November 2016, the Group sold its 74.8% share in OJSC "Arkhangelsk Sea Commercial Port", a subsidiary of the Group located in the Russian Federation, for a consideration of USD 7 million. The carrying value of net assets at the date of disposal amounted to USD 8 million. Loss on disposal in the amount of USD 1 million was recognised in the consolidated income statement.

In 2014 the Group sold goldfields assets North Eastern Goldfields Operations ("NEGO"), nickel assets Black Swan, Silver Swan, Lake Johnston Nickel Project, Avalon and Cawse, located in Western Australia. During the year ended 31 December 2016, the Group received deferred consideration in the amount of USD 2 million related to NEGO. During the year ended 31 December 2016, the Group sold certain royalty rights related to previously disposed assets in Western Australia, for USD 7 million.

On 15 April 2016, the Group sold its aircompany assets comprising 96.8% share in CJSC "Nordavia – Regional Airlines" ("Nordavia"), a subsidiary of the Group located in the Russian Federation and related to Nordavia aircrafts and infrastructure, for a consideration of USD 10 million. The carrying value of net assets at the date of disposal amounted to USD 14 million. Loss on disposal in the amount of USD 4 million was recognised in the consolidated income statement.

#### 22. SHARE CAPITAL

#### **Authorised and issued ordinary shares**

	2016	2015
At 1 January	156,995,401	158,245,476
Acquisition of own shares from shareholders	-	(1,250,075)
Sale of own shares from treasury stock	1,250,075	_
At 31 December	158,245,476	156,995,401

During the year ended 31 December 2015, the Group acquired 1,250,075 ordinary shares for a cash consideration in the amount of USD 196 million.

During the year ended 31 December 2016, the Group sold 1,250,075 treasury shares to the non-controlling shareholder Crispian Investments Limited for a cash consideration in the amount of USD 158 million.

#### Earnings per share

	31 December 2016	31 December 2015
Basic earnings per share (US Dollars per share):	16.1	11.0
The earnings and weighted average number of shares used in the calculation of earnings per s	share are as follows:	
	For the year ended 31 December 2016	For the year ended 31 December 2015
Profit for the year attributable to shareholders of the parent company	2,536	1,734
	For the year ended 31 December 2016	For the year ended 31 December 2015

156,995,401	158,245,476
_	(489,575)
54,648	_
157,050,049	157,755,901
	54,648

As at 31 December 2016 and 31 December 2015, the Group had no securities, which would have a dilutive effect on earnings per share of ordinary stock.

# 23. NON-CONTROLLING INTEREST

 $During the year ended 31 \, December \, 2016 \, the \, Group \, sold \, 10.67\% \, share \, in \, Bystrinskoye \, project \, for \, USD \, 80 \, million.$ 

#### 24. LOANS AND BORROWINGS

	Currency	Fixed or floating interest rate	Average nominal rate during the year ended 31 December 2016, %	Maturity	At 31 December 2016	At 31 December 2015
Unsecured loans	USD	floating	3.04%	2018-2025	2,704	3,404
	RUB	fixed	12.52%	2019-2021	1,990	1,655
Secured loans	USD	floating	7.37%	2024	165	_
Total loans					4,859	5,059
Corporate bonds	USD	fixed	5.62%	2018-2022	2,715	2,717
	RUB	fixed	11.60%	2026	247	480
					2,962	3,197
Finance leasing	EUR	fixed	7.10%	2026	24	-
	USD	fixed	4.20%	2019	7	10
					31	10
Total					7,852	8,266
Less: current portion due within twelve months and presented as short-term loans and borrowings			(578)	(1,124)		
Long-term loans and borrowings			7,274	7,142		

The Group is obliged to comply with a number of restrictive financial and other covenants, including maintaining certain financial ratios and restrictions on pledging and disposal of certain assets.

#### 25. EMPLOYEE BENEFIT OBLIGATIONS

	At 31 December 2016	At 31 December 2015
Accrual for annual leave	179	136
Wages and salaries	147	96
Other	21	5
Total obligations	347	237
Less: non-current obligations	(48)	(22)
Current obligations	299	215

#### **Defined contribution plans**

Amounts recognised within continuing operations in the consolidated income statement in respect of defined contribution plans were as follows:

	For the year ended 31 December 2016	
Pension Fund of the Russian Federation	273	287
Mutual accumulated pension plan	7	8
Other	5	6
Total	285	301

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# 26. PROVISIONS

	At 31 December 2016	At 31 December 2015
Current provisions		
Tax provision	124	127
Provision for social commitments	19	12
Other provisions	40	66
Total current provisions	183	205
Non-current provisions		
Decommissioning obligations	391	308
Provision for social commitments	43	38
Other long-term provisions	1	11
Total non-current provisions	435	357
Total	618	562

	Decommissioning	Social commitments	Tax	Other	Total
Balance at 1 January 2015	228	61	140	1	430
Provision accrued	-	3	4	95	102
Settlements during the year	-	(13)	(3)	-	(16)
Change in estimates	122	11	-	(1)	132
Unwinding of discount	35	6	-	3	44
Effect of translation to presentation currency	(77)	(18)	(14)	(21)	(130)
Balance at 31 December 2015	308	50	127	77	562
Provision accrued	_	12	3	4	19
Settlements during the year	-	(16)	(5)	(30)	(51)
Change in estimate	(13)	(1)	-	(27)	(41)
Unwinding of discount	32	6	-	5	43
Effect of translation to presentation currency	64	11	(1)	12	86
Balance at 31 December 2016	391	62	124	41	618

#### **Decommissioning obligations**

 $\label{thm:commission} \mbox{Key assumptions used in estimation of decommissioning obligations were as follows:}$ 

	At 31 December 2016	At 31 December 2015
Discount rates of Russian entities	8.5% - 8.6%	9.3% – 10.4%
Discount rates of non-Russian entities	3% – 5%	3% – 8%
Expected closure date of mines	up to 2059	up to 2056
Expected inflation over the period from 2017 to 2029	3.7% - 5.4%	4.1% – 8.7%
Expected inflation over the period from 2030 onwards	3.6%	4.0%

Present value of expected cost to be incurred for settlement of decommissioning obligations was as follows:

	At 31 December 2016	At 31 December 2015
Due from second to fifth year	265	170
Due from sixth to tenth year	44	49
Due from eleventh to fifteenth year	4	16
Due from sixteenth to twentieth year	26	5
Due thereafter	52	68
Total	391	308

In 2015 the Group approved a programme for reconfiguration of production facilities located in the Taimyr Peninsula. The programme started in 2016 and also included activites related to closure of the Nickel plant. In 2016 changes in the provision estimates for the reconfiguration of production facilities were recognised in Other net operating expenses in the consolidated income statement.

#### **Social commitments**

In 2010 the Group entered into several multilateral agreements with the Government of the Russian Federation, the Krasnoyarsk Regional Government and the Norilsk Municipal Authorities for construction of pre-schools and other items of social infrastructure in Norilsk and Dudinka, and resettlement of families currently residing in these cities to other Russian regions with more favorable living conditions during 2015-2020. The provision represents present value of the best estimate of the future outflow of economic benefits to settle these obligations.

#### 27. TRADE AND OTHER PAYABLES

	At 31 December 2016	At 31 December 2015
Financial liabilities		
Trade payables	605	173
Payables for acquisition of property, plant and equipment	146	93
Other creditors	141	140
Total financial liabilities	892	406
Non-financial liabilities		
Advances received	718	604
Total non-financial liabilities	718	604
Total	1,610	1,010

The maturity profile of the Group's financial liabilities was as follows:

	At 31 December 2016	At 31 December 2015
Due within one month	189	175
Due from one to three months	209	198
Due from three to twelve months	494	33
Total	892	406

#### 28. DIVIDENDS

On 16 December 2016, the Extraordinary General shareholder's meeting declared interim dividends in respect of the 9 months ended 30 September 2016 in the amount of RUB 444.25 (USD 7.21) per share with the total amount of USD 1,141 million. The dividends were paid to the shareholders in January 2017 in the amount of USD 1,169 million at the prevailing RUB/USD rates on the payments dates.

On 10 June 2016 the Annual General shareholders' meeting declared dividends for the year ended 31 December 2015 in the amount of RUB 230.14 (USD 3.61) per share with the total amount of USD 571 million (including USD 4 million in respect of Treasury shares). The dividends were paid to the shareholders in July 2016 in the amount of USD 567 million recognised in the consolidated cash flow statement, using prevailing RUB/USD rates on the payments dates.

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On 19 December 2015, the Extraordinary General shareholder's meeting declared interim dividends in respect of the 9 months ended 30 September 2015 in the amount of RUB 321.95 (USD 4.51) per share with the total amount of USD 714 million (including USD 6 million in respect of Treasury shares). The dividends were paid to the shareholders in January 2016 in the amount of USD 665 million using prevailing RUB/USD rates on the payment dates.

On 14 September 2015, the Extraordinary General shareholder's meeting declared interim dividends in respect of the 6 months ended 30 June 2015 in the amount of RUB 305.07 (USD 4.49) per share with the total amount of USD 710 million (including USD 4 million in respect of Treasury shares). The dividends were paid to the shareholders from September to December 2015 in the amount of USD 731 million, recognised in the consolidated cash flow statement using prevailing RUB/USD rates on the payment dates.

On 13 May 2015, the Annual General shareholder's meeting declared final dividends for the year ended 31 December 2014 in the amount of RUB 670.04 (USD 13.2) per share with the total amount of USD 2,083 million. The dividends were paid to the shareholders in May and June 2015 in the amount of USD 2,126 million recognised in the consolidated cash flow statement, using prevailing RUB/USD rates on the payment dates.

#### 29. RELATED PARTIES TRANSACTIONS AND OUTSTANDING BALANCES

Related parties include shareholders, associates and entities under common ownership and control of the Group's major shareholders and key management personnel. The Group defines major shareholders as shareholders, which have significant influence over the Group activities. The Company and its subsidiaries, in the ordinary course of their business, enter into various sale, purchase and service transactions with related parties. Transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties are disclosed below.

		Sale of goods and services	Purchase of goods and services and financial assets			
Transactions with related parties	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the year ended 31 December 2015		
Entities under ownership and control of the Group's major shareholders	13	-	177	19		
Associates of the Group	2	6	169	242		
Total	15	6	346	261		

		Accounts receivable and cash	Accounts payable, I	loans and borrowings received
Outstanding balances with related parties	At 31 December 2016	At 31 December 2015	At 31 December 2016	At 31 December 2015
Entities under ownership and control of the Group's major shareholders	-	-	2	-
Associates of the Group	1	2	20	25
Total	1	2	22	25

#### Terms and conditions of transactions with related parties

Sales to and purchases from related parties of electricity, heat energy and natural gas supply were made at prices established by the Federal Tariff Service, government regulator responsible for establishing and monitoring prices on the utility and telecommunication markets in the Russian Federation.

#### Compensation of key management personnel

Key management personnel of the Group consists of members of the Management Board and the Board of Directors. For the year ended 31 December 2016 remuneration of key management personnel of the Group included salary and performance bonuses amounted to USD 62 million (for the year ended 31 December 2015: USD 61 million).

#### 30. COMMITMENTS

#### Capital commitments

At 31 December 2016, contractual capital commitments amounted to USD 1,138 million (31 December 2015: USD 798 million).

#### **Operating leases**

The land plots in the Russian Federation where the Group's production facilities are located are owned by the state. The Group leases land through operating lease agreements, which expire in various years through 2065. According to the terms of lease agreements the rent rate is revised annually subject to the decision of the relevant local authorities. The Group entities have a renewal option at the end of the lease period and an option to buy land at any time, at a price established by the local authorities.

Future minimum lease payments due under non-cancellable operating lease agreements for land and buildings were as follows:

	At 31 December 2016	At 31 December 2015
Due within one year	29	31
From one to five years	95	128
Thereafter	92	79
Total	216	238

At 31 December 2016, ten aircraft lease agreements (31 December 2015: nine) were in effect. The lease agreements have an average life of five (31 December 2015: eight) years with a renewal option at the end of the term and place no restrictions upon lessees by entering into these agreements.

Future minimum lease payments due under non-cancellable operating lease agreements for aircrafts were as follows:

	At 31 December 2016	At 31 December 2015
Due within one year	43	37
From one to five years	70	89
Total	113	126

#### Social commitments

The Group contributes to mandatory and voluntary social programs and maintains social assets in the locations where it has its main operating facilities. The Group's social assets as well as local social programs benefit the community at large and are not normally restricted to the Group's employees.

The Group's commitments are funded from its own cash resources.

#### 31. CONTINGENCIES

#### Litigation

At 31 December 2016 the Group has unresolved legal disputes with the state authorities due to non-approval of the reduction of the negative environmental impact charge in relation to the environmental protection expenditure incurred by the Group. Management believes that the Group complied with all relevant regulations to be eligible for the reduction and that no provision for these disputes is required. Additionally, the Group is involved in other legal disputes in the ordinary course of its operations, with the probability of their unfavorable resolution being assessed as possible. At 31 December 2016, total claims under unresolved litigation amounted to approximately USD 25 million (31 December 2015: USD 53 million).

#### **Taxation contingencies in the Russian Federation**

The Russian Federation currently has a number of laws related to various taxes imposed by both federal and regional governmental authorities. Applicable taxes include value-added (VAT), corporate income tax, mandatory social security contributions, together with others. Tax returns, together with other legal compliance areas (for example, customs and currency control matters), are subject to review and investigation by government authorities, which are authorised by law to impose severe fines, penalties and interest charges. Generally, tax returns remain open and subject to inspection for a period of three years following the fiscal year.

While management of the Group believes that in the financial statements of the Group it has provided adequate reserves for tax liabilities based on its interpretation of current and previous legislation, the risk remains that tax authorities in the Russian Federation could take differing positions with regard to interpretive issues. This uncertainty may expose the Group to additional taxation, fines and penalties.

Transfer pricing legislation enacted in the Russian Federation starting from 1 January 2012 provides for major modifications making local transfer pricing rules closer to OECD guidelines, but creating additional uncertainty in practical application of tax legislation in certain circumstances.

These transfer pricing rules provide for an obligation for the taxpayers to prepare transfer pricing documentation with respect to controlled transactions and prescribe the basis and mechanisms for accruing additional taxes and interest in case prices in the controlled transactions differ from the market level.

Currently there is lack of practice of applying the transfer pricing rules by the tax authorities and courts, however, it is anticipated that transfer pricing arrangements will be subject to very close scrutiny potentially having effect on the financial results and the financial position of the Group.

#### **Environmental matters**

The Group is subject to extensive federal, state and local environmental controls and regulations in the countries in which it operates. The Group's operations involve pollutant emissions to air and water objects as well as formation and disposal of production wastes.

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Management of the Group believes that the Group is in compliance with all current existing environmental legislation in the countries in which it operates. However, environmental laws and regulations continue to evolve. The Group is unable to predict the timing or extent to which those laws and regulations may change. Such change, if it occurs, may require that the Group modernise technology to meet more stringent standards.

#### Russian Federation risk

As an emerging market, the Russian Federation does not possess a fully developed business and regulatory infrastructure including stable banking and judicial systems which would generally exist in a more mature market economy. The economy of the Russian Federation is characterised by a currency that is not freely convertible outside of the country, currency controls, low liquidity levels for debt and equity markets, and continuing inflation. As a result, operations in the Russian Federation involve risks that are not typically associated with those in more developed markets. Stability and success of Russian economy and the Group's business mainly depends on the effectiveness of economic measures undertaken by the government as well as the development of legal system.

The situation in Ukraine has increased the perceived risks of doing business in the Russian Federation. The imposition of economic sanctions on Russian individuals and legal entities has resulted in increased economic uncertainty including more volatile equity and currency markets, a reduction in both local and foreign investment inflows and a significant tightening in the availability of credit. Management assesses the changes in the Russian business environment did not significantly affect the operations, financial results and the financial position of the Group.

#### 32. FINANCIAL RISK MANAGEMENT

#### Capital risk management

The Group manages its capital structure in order to safeguard the Group's ability to continue as a going concern and to maximise the return to shareholders through the optimisation of debt and equity balance.

The capital structure of the Group consists of debt, which includes long and short-term borrowings, equity attributable to shareholders of the parent company, comprising share capital, other reserves and retained earnings.

Management of the Group regularly reviews its level of leverage, calculated as the proportion of Net Debt to EBITDA, to ensure that it is in line with the Group's financial policy aimed at preserving investment grade credit ratings.

As at 19 and 25 October 2016 the Company maintains BBB- investment grade ratings, assigned by rating agencies Fitch and S&P's, despite S&P's maintenance of Russian sovereign rating BB+ on 19 September 2016. The Company's rating assigned by Moody's is restrained by Russia's country ceiling at Ba1 level.

#### Financial risk factors and risk management structure

In the normal course of its operations, the Group is exposed to a variety of financial risks: market risk (including interest rate and currency risk), credit risk and liquidity risk. The Group has an explicit risk management structure aligned with internal control procedures that enable it to assess, evaluate and monitor the Group's exposure to such risks.

Risk management is carried out by financial risk management. The Group has adopted and documented policies covering specific areas, such as market risk management system, credit risk management system, liquidity risk management system and use of derivative financial instruments.

#### Interest rate risk

Interest rate risk is the risk that changes in interest rates will adversely impact the financial results of the Group. The Group's interest rate risk arises from long- and short-term borrowings at floating rates.

The Group performs thorough analysis of its interest rate risk exposure regularly. Various scenarios are simulated. The table below details the Group's sensitivity to a 2 percentage points increase in those borrowings subject to a floating rate. The sensitivity analysis is prepared assuming that the amount of liabilities at floating rates outstanding at the reporting date was outstanding for the whole year.

	2% LIBOR increase impact
For the year ended 31 December 2016	
57	68

Management believes that the Group's exposure to interest rate risk fluctuations does not require additional hedging activities.

#### Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument denominated in foreign currency will fluctuate because of changes in exchange rates.

The major part of the Group's revenue and related trade accounts receivable are denominated in US dollars and therefore the Group is exposed primarily to USD currency risk. Foreign exchange risk arising from other currencies is assessed by management of the Group as immaterial.

The carrying amounts of monetary assets and liabilities denominated in foreign currencies other than functional currencies of the individual Group entities at 31 December 2016 and 31 December 2015 were as follows:

	At 31 December 2016				At	31 December 2015
	USD	HKD	Other currencies	USD	HKD	Other currencies
Cash and cash equivalents	1,053	1,014	32	2,068	1,009	32
Trade and other receivables	162	_	2	88	_	8
Other assets	140	-	101	95	-	115
Total assets	1,355	1,014	135	2,251	1,009	155
Trade and other payables	261	-	66	200	_	82
Loans and borrowings	5,584	-	-	6,121	_	_
Other liabilities	12	-	24	11	_	5
Total liabilities	5,857	_	90	6,332	_	87

Currency risk is monitored on a monthly basis utilising sensitivity analysis to assess if a risk for a potential loss is at an acceptable level. The Group calculates the financial impact of exchange rate fluctuations on USD-denominated monetary assets and liabilities in respect of the Group entities where functional currency is the Russian Rouble. The following table presents the decrease of the Group's profit and equity before tax due to a 20% weakening of the Russian Rouble against USD.

		US Dollar 20% strengthening
	For the year ended 31 December 2016	
Loss	900	816

Given that the Group's exposure to currency risk for the monetary assets and liabilities is offset by the revenue denominated in USD, management believes that the Group's exposure to currency risk is acceptable. The Group does not apply hedge instruments.

#### Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. Credit risk arises from cash and cash equivalents, bank deposits as well as credit exposures to customers, including outstanding uncollateralised trade and other receivables. The Group's exposure to credit risk is continuously monitored and controlled.

Having dealing with new counterparty, management assesses the creditworthiness of a potential customer or financial institution. If the counterparty is rated by major independent credit-rating agencies, this rating is used to evaluate creditworthiness; otherwise it is evaluated using an analysis of the latest available financial statements of the counterparty and other publically available information.

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The balances of ten major counterparties are presented below. The banks have a minimum of BB+ credit rating.

Cook and sook assistants	Outstanding balance		
Cash and cash equivalents	At 31 December 2016	At 31 December 2015	
Bank A	1,014	1,009	
Bank B	653	948	
Bank C	521	632	
Bank D	381	369	
Bank E	226	312	
Total	2,795	3,270	
Trade receivables			
Company A	11	17	
Company B	9	10	
Company C	7	8	
Company D	7	6	
Company E	6	5	
Total	40	46	

The Group is not economically dependent on a limited number of customers because the majority of its products are highly liquid and traded on the world commodity markets. Metal and other sales to the Group's customers are presented below:

	For the year ended 31 December 2016				For the year ended	31 December 2015
	Number of customers	Turnover USD million	%	Number of customers	Turnover USD million	%
Largest customer	1	973	12	1	1,025	12
Next 9 largest customers	9	2,587	31	9	3,382	40
Total	10	3,560	43	10	4,407	52
Next 10 largest customers	10	1,154	14	10	1,091	13
Total	20	4,714	57	20	5,498	64
Remaining customers		3,545	43		3,044	36
Total		8,259	100		8,542	100

Management of the Group believes that with the exception of the bank balances indicated above there is no significant concentration of credit risk.

The following table provides information about the exposure to credit risk for cash and cash equivalents, loans, irrevocable letters of credit, bank deposits and trade and other receivables:

	At 31 December 2016	At 31 December 2015
Cash and cash equivalents	3,301	4,054
Loans, trade and other receivables	349	225
Irrevocable letters of credit	101	121
Bank deposits	10	5

#### Liquidity risk

Liquidity risk is the risk that the Group will not be able to settle all liabilities as they fall due.

The Group has a well-developed liquidity risk management system to exercise control over its short-, medium- and long-term funding. The Group manages liquidity risk by maintaining adequate reserves, committed and uncommitted banking facilities and reserve borrowing facilities.

Management continuously monitors rolling cash flow forecasts and performs analysis of maturity profiles of financial assets and liabilities, and undertakes detailed annual and quarterly budgeting procedures.

The following table contains the maturity profile of the Group's borrowings (maturity profiles for other liabilities are presented in note 27) based on contractual undiscounted payments, including interest:

At 31 December 2016	Total	Due within one month	Due from one to three months	Due from three to twelve months	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there- after
Fixed rate bank loans and be	orrowings								
Principal	4,996	-	-	5	741	668	1,348	976	1,258
Interest	1,882	-	76	357	417	394	306	137	195
	6,878	_	76	362	1,158	1,062	1,654	1,113	1,453
Floating rate bank loans and	d borrowings								
Principal	2,899	11	134	431	445	553	222	609	494
Interest	419	4	18	71	83	73	63	43	64
	3,318	15	152	502	528	626	285	652	558
Total	10,196	15	228	864	1,686	1,688	1,939	1,765	2,011
At 31 December 2015	Total	Due within one month	Due from one to three months	Due from three to twelve months	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there- after
Fixed rate bank loans and be	orrowings								
Principal	4,874	_	480	3	2	742	551	1,273	1,823
Interest	1,838	-	69	310	362	346	325	259	167
	6,712	-	549	313	364	1,088	876	1,532	1,990
Floating rate bank loans and	d borrowings								
Principal	3,430	-	144	501	626	988	754	17	400
Interest	366	6	18	69	85	62	33	21	72
						4.050	707	20	470
	3,796	6	162	570	711	1,050	787	38	472

At 31 December 2016 the Group had available financing facilities for the management of its day to day liquidity requirements of USD 2,622 million (31 December 2015: USD 1,870 million) which reflects the initiative of the Group's prudent financial policy through the increase of undrawn committed credit facilities as an additional source of the medium term liquidity.

#### 33. FAIR VALUE OF FINANCIAL INSTRUMENTS

Management believes that the carrying value of financial instruments such as cash and cash equivalents (refer to note 20), short-term accounts receivable (refer to note 19) and payable (refer to note 27), approximates to their fair value.

Certain financial instruments such as other financial assets and finance leases obligations were excluded from fair value analysis either due to their insignificance or due to the fact that assets were acquired or liabilities were assumed close to the reporting dates and management believes that their carrying value either approximates to their fair value or may not significantly differ from each other.

Financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable as follows:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the assets or liability, either directly or indirectly; and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data.

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The information presented below is about loans and borrowings, whose carrying values differ from their fair values.

		At 31 December 2016		At 31 December 2015		
	Carrying value	rying value Fair value Level 1 Carrying value				
Fixed rate corporate bonds	2,962	3,171	3,197	3,210		
Total	2,962	3,171	3,197	3,210		
Loans and borrowings including:	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2		
Floating rate loans and borrowings	2,869	2,734	3,404	3,339		
Fixed rate loans and borrowings	1,990	2,121	1,655	1,722		
Total	4,859	4,855	5,059	5,061		

The fair value of financial liabilities presented in table above is determined as follows:

- the fair value of corporate bonds was determined based on market quotations existing at the reporting dates;
- the fair value of floating rate and fixed rate loans and borrowings at 31 December 2016, was calculated based on the present value of future cash flows (principal and interest), discounted at the best management estimation of market rates, taking into consideration currency of the loan, expected maturity and risks attributable to the Group existing at the reporting date. The discount rates ranged from 4.28% to 6.63% for USD-denominated loans and borrowings (2015: from 4.00% to 5.55%) and 10.63% (2015:11.60%) for RUB-denominated loans.

#### 34. INVESTMENTS IN SIGNIFICANT SUBSIDIARIES AND ASSOCIATES

				Effective % held
Subsidiaries by business segments	Country	Nature of business	At 31 December 2016	At 31 December 2015
Group GMK				
JSC "Norilsky Kombinat"	Russian Federation	Rental of equipment	100	100
JSC "Taimyrgaz"	Russian Federation	Gas extraction	100	100
JSC "Norilskgazprom"	Russian Federation	Gas extraction	100	100
JSC "Taimyrenergo"	Russian Federation	Rental of equipment	100	100
JSC "NTEK"	Russian Federation	Electricity production and distribution	100	100
LLC "ZSC"	Russian Federation	Construction	100	100
LLC "Norilsknickelremont"	Russian Federation	Repairs	100	100
LLC "Norilskgeologiya"	Russian Federation	Geological works	100	100
LLC "Norilskyi obespechivaushyi complex"	Russian Federation	Production of spare parts	100	100
Group KGMK				
JSC "Kolskaya GMK"	Russian Federation	Mining and Metallurgy	100	100
LLC "Pechengastroy"	Russian Federation	Repairs	100	100
Norilsk Nickel Harjavalta				
Norilsk Nickel Harjavalta OY	Finland	Metallurgy	100	100
Other metallurgical				
LLC "GRK "Bystrinskoye"	Russian Federation	Mining	89.33	100
Other non-metallurgical				
Metal Trade Overseas A.G.	Switzerland	Distribution	100	100
LLC "Institut Gypronickel"	Russian Federation	Research	100	100
JSC "TTK"	Russian Federation	Supplier of fuel	100	100
OJSC "Enisey River Shipping Company"	Russian Federation	River shipping operations	100	100
OJSC "Arkhangelsk Sea Commercial Port"	Russian Federation	Sea port	-	74.80
LLC "Aeroport Norilsk"	Russian Federation	Airport	100	100
JSC "AK "NordStar"	Russian Federation	Aircompany	100	100

Nkomati Nickel Mine	Republic of South Africa	Mining	50	50				
Other metallurgical								
Associates by dusiness segments	Country	Nature of Dustriess	At 31 December 2016	At 31 December 2015				
Associates by business segments	Country Nature of business	Country Nature of husiness		Effective % h				

#### 35. EVENTS SUBSEQUENT TO THE REPORTING DATE

On 24 January 2017 the Board of Directors of PJSC MMC Norilsk Nickel has approved the sale of an up to 39.32% stake in the Bystrinskiy Project to CIS Natural Resources Fund. The sale contract closing is subject to certain pre-conditions and necessary regulatory approvals.

On 15 February 2017 the Group increased a non-controlling interest in a related party for the consideration of USD 100 million.

# HISTORY OF OPERATING PERFORMANCE

Norilsk Nickel group saleable metals production	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007¹	2006
TOTAL METAL PRODUCTION											
Nickel, t	235,749	266,406	274,248	285,292	300,340	295,098	297,329	282,894	300,585	280,402	243,985
from own Russian feed	196,809	220,675	223,224	219,273	223,153	234,906	235,518	232,813	230,550	234,454	243,985
from 3d party feed	38,940	45,731	51,024	66,019	77,187	60,191	60,322	47,076	67,393	44,775	0
Copper, t	360,217	369,426	368,009	371,063	363,764	377,944	388,872	402,261	419,208	416,084	425,107
from own Russian feed	343,889	352,766	345,897	345,737	344,226	362,854	365,698	382,443	400,344	404,465	421,182
from 3d party feed	16,328	16,660	22,112	25,326	19,538	15,090	22,329	18,382	17,517	10,963	3,925
Palladium, koz	2,618	2,689	2,752	2,662	2,732	2,806	2,862	2,805	2,820	3,124	3,164
from own Russian feed	2,526	2,575	2,582	2,529	2,624	2,704	2,723	2,676	2,701	3,050	3,164
from 3d party feed	100	114	170	133	108	102	132	118	106	67	0
Platinum, koz	644	656	662	651	683	696	694	661	661	745	751
from own Russian feed	610	610	595	604	658	672	663	636	632	727	751
from 3d party feed	36	46	67	47	25	24	29	22	24	45	0
Polar division and Kola MMC (Russia)											
Nickel, t	182,095	222,016	228,438	231,798	233,632	237,228	235,518	232,813	232,302	234,454	243,985
Polar division	50,860	96,916	122,390	122,700	124,000	124,000	124,200	124,250	122,000	118,809	121,740
Kola MMC	131,235	125,100	106,048	109,098	109,632	113,228	111,318	108,563	110,302	115,645	122,245
from Russian Company feed	126,937	123,335	100,834	96,573	99,153	110,906	111,318	108,563	108,550	115,645	122,245
from 3d party feed	4,298	1,765	5,214	12,526	10,479	2,321	0	0	1,752	0	0
Copper, t	350,619	355,707	354,944	359,102	352,466	363,460	365,698	382,443	400,344	404,465	425,107
Polar division	280,347	292,632	297,552	296,760	295,610	303,940	309,320	323,705	338,511	338,435	351,180
Kola MMC	70,272	63,075	57,392	62,342	56,855	59,520	56,378	58,738	61,833	66,030	73,927
from Russian Company feed	63,542	60,134	48,345	48,977	48,616	58,914	56,378	58,738	61,833	66,030	70,002
from 3d party feed	6,730	2,941	9,046	13,365	8,240	606	0	0	0	0	3,925
Palladium, koz	2,554	2,606	2,660	2,580	2,628	2,704	2,723	2,676	2,701	3,050	3,164
Polar division	1,703	1,935	2,065	2,006	1,989	2,038	2,053	2,010	2,054	2,299	2,357
Kola MMC	851	671	595	574	639	666	670	666	647	751	807
from Russian Company feed	815	640	517	523	635	666	670	666	647	751	807
from 3d party feed	36	31	78	51	4	0	0	0	0	0	0
Platinum, koz	622	622	627	628	660	672	663	636	632	727	751
Polar division	449	488	500	504	529	536	529	505	509	584	599
Kola MMC	173	134	127	124	131	136	134	131	123	143	152
from Russian Company feed	159	122	95	100	129	136	134	131	123	143	152
from 3d party feed	14	12	32	23	2	0	0	0	0	30	0

Norilsk Nickel group saleable metals production	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007¹	2006
Norilsk Nickel Harjavalta (Finland) <sup>2</sup>											
Nickel, t	53,654	43,479	42,603	44,252	45,518	48,524	49,159	28,452	29,344	29,339	_
from Russian Company feed	19,012	424	0	0	0	0	0	0	0	0	_
Copper, t	9,598	13,048	10,629	6,549	1,006	5,681	11,279	5,030	4,220	5,037	-
from Russian Company feed	593	0	0	0	0	0	0	0	0	0	
Palladium, koz	64	78	74	39	21	34	48	18	11	12	-
from Russian Company feed	8	0	0	0	0	0	0	0	0	0	
Platinum, koz	22	33	31	16	9	12	15	5	5	6	_
form Russian Company feed	2	0	0	0	0	0	0	0	0	0	
Norilsk Nickel Australia											
Nickel, t		0	0	2,826	8,975	0	0	1,223	15,528	5,339	_
Norilsk Nickel Africa (Tati) <sup>3</sup>											
Nickel, t	0	911	3,207	6,416	12,215	9,346	11,163	17,401	20,769	10,097	_
Copper, t	0	671	2,436	5,412	10,292	8,803	11,050	13,352	13,297	5,926	_
Palladium, koz	0	5	18	43	83	68	84	100	95	55	_
Platinum, koz	0	1	4	7	14	12	14	17	19	9	_

Overseas assets feature post-acquisition results.
 Production results include processing of nickel concentrate from Russian feed, Nkomati and purchased materials.
 The asset was sold in Q2 2015.

## MINERAL RESOURCES AND ORE RESERVES

The mineral resources and ore reserves of the deposits of the Taimyr and Kola peninsulas are resulted on operating mines as at December 31, 2016

						Me	tal grade					Contai	ned metal
Region, deposit, ore type	Ore, kt	Ni	Cu	Pd	Pt	Au	6 PGM	Ni	Cu	Pd	Pt	Au	6 PGM
		%	%	g/t	g/t	g/t	g/t	kt	kt	koz	koz	koz	koz
TAIMYR PENINSULA													
Proven reserves													
Talnakh ore field	335,171	0.76	1.57	3.78	1.02	0.21	5.00	2,538	5,255	40,692	10,983	2,254	53,828
Rich	44,903	2.54	3.22	5.38	1.03	0.10	6.75	1,141	1,444	7,763	1,483	150	9,750
Cuprous	25,535	0.98	3.99	9.48	2.28	0.52	11.89	251	1,020	7,786	1,870	429	9,762
Disseminated	264,733	0.43	1.05	2.95	0.90	0.20	4.03	1,146	2,791	25,143	7,630	1,675	34,316
Norilsk-1 deposit (Disseminated ore)	23,025	0.35	0.50	4.01	1.61	0.18	5.91	80	116	2,966	1,194	135	4,379
Probable reserves													
Talnakh ore field	314,355	1.18	2.01	4.61	1.14	0.28	6.03	3,699	6,303	46,576	11,479	2,823	60,991
Rich	87,406	2.85	3.37	6.79	1.40	0.27	8.70	2,491	2,943	19,082	3,932	752	24,456
Cuprous	55,794	0.76	3.33	7.34	1.91	0.60	9.46	425	1,857	13,172	3,432	1,072	16,971
Disseminated	171,155	0.46	0.88	2.60	0.75	0.18	3.56	783	1,503	14,322	4,115	999	19,564
Norilsk-1 deposit (Disseminated ore)	22,501	0.28	0.36	4.30	1.72	0.18	6.35	63	82	3,107	1,247	131	4,590
Proven and probable reserves	695,052	0.92	1.69	4.18	1.11	0.24	5.54	6,380	11,756	93,341	24,903	5,343	123,788
Measured and indicated resources													
Talnakh ore field	1,569,869	0.74	1.39	3.53	0.96	0.21	4.70	11,546	21,769	178,214	48,523	10,844	237,066
Rich	114,695	3.23	3.90	7.42	1.50	0.25	9.45	3,700	4,471	27,352	5,517	920	34,853
Cuprous	68,798	1.01	4.32	9.77	2.47	0.70	12.47	698	2,969	21,617	5,467	1,549	27,576
Disseminated	1,386,376	0.52	1.03	2.90	0.84	0.19	3.92	7,148	14,329	129,245	37,539	8,375	174,637
Norilsk-1 deposit (Disseminated ore)	149,268	0.30	0.38	3.71	1.45	0.10	5.35	444	570	17,814	6,944	458	25,651
Measured and indicated resources	1,719,137	0.70	1.30	3.55	1.00	0.20	4.75	11,990	22,339	196,028	55,467	11,302	262,717
Inferred resources	449,474	0.88	1.82	4.35	1.11	0.28	5.73	3,942	8,160	62,718	15,922	3,743	82,018

		Metal grad							Contained metal				
Region, deposit, ore type	Ore, kt	Ni	Cu	Pd	Pt	Au	6 PGM	Ni	Cu	Pd	Pt	Au	6 PGM
		%	%	g/t	g/t	g/t	g/t	kt	kt	koz	koz	koz	koz
KOLA PENINSULA (DISSEMINATED ORE)													
Proven ore reserves	54,939	0.56	0.24	0.03	0.02	0.01	0.05	310	133	51	37	15	89
Probable reserves	77,708	0.59	0.32	0.03	0.02	0.01	0.06	459	245	79	56	29	143
Proven and probable reserves	132,647	0.58	0.28	0.03	0.02	0.01	0.05	769	378	130	93	44	232
Measured and indicated resources	339,644	0.69	0.33	0.05	0.03	0.02	0.08	2,328	1,124	506	330	182	896
Inferred resources	137,636	0.60	0.31	0.04	0.03	0.01	0.07	874	432	178	119	57	312
TOTAL PROVEN AND PROBABLE RESERVES	827,699							7,149	12,134	93,471	24,996	5,387	124,020
TOTAL MEASURED AND INDICATED RESOURCES	2,058,781							14,318	23,463	196,534	55,797	11,484	263,613
TOTAL INFERRED RESOURCES	587,110							4,816	8,592	62,896	16,041	3,800	82,330

#### Notes:

- The mineral resources and ore reserves of the deposits of the Taimyr and Kola peninsulas are resulted on operating mines.
- Data regarding the mineral resources and ore reserves of the deposits of the Taimyr and Kola peninsulas were classified according to the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC code), created by the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists, and the Minerals Council of Australia, subject to the terminology recommended by the Russian Code for Public Reporting of Exploration Results, Mineral Resources, Mineral Reserves (NAEN Code).
- Data regarding the reserves and resources is based on the balance-sheet reserves of A, B, C<sub>1</sub> and C<sub>2</sub>, categories (according to the terminology of the State Committee for Mineral Reserves) as of the end of the given calendar year.
- Figures given as "Total" may differ from the sum of individual numbers due to rounding. Certain values may in some instances vary slightly from previously published values.
- The six platinum group metals (PGMs) are platinum, palladium, rhodium, ruthenium, osmium, and iridium.
   Hereafter in the annual report, troy ounces are used as a weight measure for PGMS and gold.
- Proven and probable ore reserves are included in mineral resources.
- Ore losses applied ranged from 1.6 % to 26% and dilution from 6% to 31.9%.

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# REPORT ON COMPLIANCE WITH THE PRINCIPLES AND RECOMMENDATIONS SET FORTH IN THE CORPORATE CODE

#### Statement of the Board of Directors

In line with best practices, the Board of Directors of MMC Norilsk Nickel reaffirms the Company's commitment to the highest corporate governance standards, and confirms its compliance with key material principles of the Corporate Governance Code as recommended by the Bank of Russia.

The Board of Directors views compliance with key principles and recommendations of the Corporate Governance Code as an efficient tool to improve corporate governance and ensure long-term sustainable growth.

## Overview of the Company's corporate governance model and practices

The Company's corporate governance model is based on the applicable laws of the Russian Federation and principles set forth in the Corporate Governance Code, which serves as a key source for development of the Company's by-laws and a guidance to foster best corporate governance practices.

The corporate governance model adopted by the Company and established corporate governance practices seek to harmonise the relationships among shareholders, investors, directors, executives, employees, and other stakeholders contributing to the Company's business.

The corporate governance model of MMC Norilsk Nickel ensures:

- equitable and fair treatment of every shareholder exercising their right to take part in managing the Company;
- strategic guidance of the Company as developed by the Board of Directors:
- control of the Board of Directors over the Company's executive bodies, and accountability of directors and executive bodies to the Company's shareholders;
- efficient control over the Company's financial and operating performance;
- timely and accurate disclosure of all material aspects related to the Company's business, including its financial position, performance, ownership and governance structure.

For the structure of governance and control bodies underlying the corporate governance model of MMC Norilsk Nickel, see Chapter 3 (Corporate Governance) of the Company's 2016 Annual Report.

## Criteria to assess compliance with the principles set forth in the Corporate Governance Code

For the purpose of the Annual Report, and with a reference to any given provision of the Corporate Governance Code, "complied with" / "not complied with" shall mean compliance / non-compliance of MMC Norilsk Nickel with the core (material part) of the corporate governance principle/

recommendation pursuant to the Company's Charter and (or) by-laws effective as at the date of this Annual Report and (or) pursuant to the Company's established corporate governance practices.

## Actions and measures scheduled (suggested) by the Company to improve the corporate governance model and practices

Today, enhancement of corporate governance materially contributes to the social and economic development of MMC Norilsk Nickel.

In pursuance of the Company's Corporate Governance Framework Improvement Programme, as approved by the Corporate Governance, Nomination and Remuneration Committee of Norilsk Nickel's Board of Directors in December 2013, during 2016 the Company updated its by-laws that regulate the proceedings of the committees of the Company's Board of Directors:

- Regulation on the Corporate Governance, Nomination and Remuneration Committee of the Board of Directors of MMC Norilsk Nickel;
- Regulation on the Audit Committee of the Board of Directors of MMC Norilsk Nickel;
- Regulation on the Budget Committee of the Board of Directors of MMC Norilsk Nickel;
- Regulation on the Strategy Committee of the Board of Directors of MMC Norilsk Nickel.

The key amendments are mostly connected with the alignment of the Company's by-laws with the Listing Rules of the Moscow Exchange and recommendations of the Bank of Russia.

In 2017, the Company is planning to gradually implement the principles and procedures set out in the approved regulations in order to improve the performance of the Company's Board of Directors and its committees.

With the view to addressing the matters of dividend-related decision making process, the procedure to determine its amount, time and conditions of payment, the Company's Board of Directors has approved the Regulation on the Dividend Policy.

# Key principles and recommendations complied with by MMC Norilsk Nickel (hereinafter, the Company)

No.	Key principles and recommendations	Note
1.	SHAREHOLDER RIGHTS AND EQUITABLE	TREATMENT OF SHAREHOLDERS
1.1.	The company should ensure equitable and fair treatment of every shareholder exercising their right to take part in managing the company.	The rights of both minority and majority shareholders are equally respected at MMC Norilsk Nickel. Equitable and fair treatment of every shareholder exercising their right to take part in management of the Company is enforced by applicable laws, and regulations and procedures related to the General Meeting of Shareholders as set out in the Company's Charter and by-laws.
1.2.	The general meeting of shareholders should approve a by-law (Regulation on General Meeting of Shareholders) setting forth the procedures to convene, prepare for, and hold such general meetings.	On 6 June 2014, the General Meeting of Shareholders of MMC Norilsk Nickel approved the Regulation on the General Meeting of Shareholders of MMC Norilsk Nickel setting forth procedures to convene, prepare for, and hold its general meetings.
1.3.	It is recommended that the company serve general meeting notices and make relevant materials available no later than 30 days in advance, unless a longer period is specified by the applicable laws.	, 5,
1.4.	The record date should be disclosed no later than seven days in advance.	In accordance with Clause 2.28 of the Regulation on the General Meeting of Shareholders of MMC Norilsk Nickel, Clause 6.9 of the Company's Charter, the record date shall be disclosed "at least five days in advance."  As a matter of fact, since 2014, the Company has been disclosing the record date within a time period exceeding the seven days recommended by the Corporate Governance Code.
1.5.	It is recommended that the company amend its charter by extending the deadline for shareholders to propose items for the agenda of the forthcoming annual general meeting from thirty (30) (as per the applicable law) to sixty (60) days following the end of the calendar year.	If compared with the Code, MMC Norilsk Nickel has opted for a more conservative approach. In accordance with Clause 2.2 of the Regulation on the General Meeting of Shareholders of MMC Norilsk Nickel, and Clause 6.3 of the Charter, "items for the agenda of the Annual Meeting and nominees to the Board of Directors and Audit Commission shall be proposed to the Company within 90 days following the end of a fiscal year."

to directors, executives, and other key

managers.

No.	Key principles and recommendations	Note
1.6.	During the preparation for and running of the general meeting, the shareholders should have an unrestricted opportunity to put questions to members of the company's executive bodies, directors, the chief accountant, members of the audit committee, the company's auditors, and prospective members of the company's management and control bodies.  It is recommended that the company invite the said persons to attend general meetings of shareholders.	In accordance with the Regulation on the General Meeting of Shareholders of MMC Norilsk Nickel, the Meeting shall be attended by the Company's President, Chief Accountant, members of the Audit Commission, the Chairman, or other members of the Board of Director's Audit Committee, as well as the Company's auditor. Nominees to the Company's corporate bodies and representatives of the auditor proposed for the approval by the Meeting shall be also invited (Clauses 5.16, 5.17).  Questions from shareholders shall be submitted in writing. Notes with questions shall be handed over to the Secretary of the Meeting (Clause 5.20).
1.7.	The company should develop and introduce a transparent and coherent procedure to determine the amount of dividends and pay them out.  Companies issuing consolidated financial statements are advised to set out a procedure for determining the minimum percentage of their consolidated net profit to be distributed as dividends.	Under the Regulation on the Dividend Policy approved by the Company's Board of Directors, in determining the recommended dividend amount, the Board of Directors seeks to make sure that the annual dividends on the Company's shares account for at least 30% of the Group's consolidated EBITDA.
1.8.	The company should refrain from any actions that will or may result in artificial redistribution of corporate control.	MMC Norilsk Nickel does not take any actions that may result in artificial redistribution of corporate control as prescribed by the applicable law prohibiting treasury stock (shares owned by the Company) from participating in the management of a joint stock company.
1.9.	The shareholders should have on hand reliable and effective ways to record their rights to shares and an opportunity to dispose of such shares freely and easily.	The Company has selected a prominent firm as the Company's registrar. It has reliable tools fine-tuned to effectively record shareholder rights and ensure free exercise thereof.
2.	THE COMPANY'S BOARD OF DIRECTORS	
2.1.	The board of directors should be responsible for strategic governance of the company by defining key principles and approaches to risk management and internal controls, exercising control over the company's executive bodies and discharging other key responsibilities.	Pursuant to the Charter of MMC Norilsk Nickel, the Company's Board of Directors is authorised to:  determine the Company's business priorities,  development concepts/strategies and methods for their implementation; approve the Company's plans and budgets and amendments thereto (Clause 9.3.1);  oversee the management of MMC Norilsk Nickel and its financial and economic operations, assess performance of the Company's President and members of the Company's Management Board, monitor implementation of resolutions adopted by the Board of Directors, and review quarterly financial and economic reports submitted by the Company's Management Board (Clause 9.3.36);  identify key risks associated with the operations of MMC Norilsk Nickel, and implement relevant risk management initiatives and procedures (Clause 9.3.34).
2.2.	The board of directors should define the company's policy on remuneration and/ or reimbursements (compensations) due	Pursuant to the Company's Charter, the Board of Directors of MMC Norilsk Nickel is authorised to:  • determine remuneration and compensation payable to the Company's President; approve, amend and terminate the contract setting out the President's rights and obligations (Clause 9.3.9.1);

Shareholders on 6 June 2014.

• determine remuneration and compensation payable to members of the Company's Management Board;

approve, amend and terminate the contracts setting out such members' rights and obligations (Clause

With regard to the Remuneration Policy for the Board of Directors of MMC Norilsk Nickel, the Company has opted for a more conservative solution. The respective document was approved by the Annual General Meeting of

2.3. The board of directors should manage the company in an efficient and competent manner, and make fair and independent judgements and decisions in line with the interests of the company and its shareholders.

The board of directors should play a key role in prevention, identification and settlement of internal conflicts among the company's bodies, shareholders and employees.

It is recommended that the board of directors be composed of persons with an impeccable business and personal track record; directors should have sufficient skills, expertise and experience to make decisions falling within the board's remit and perform their responsibilities efficiently.

Note

Pursuant to Clause 8.5 of the Company's Charter, in exercising their rights and discharging their duties, members of the Board of Directors shall act in the interests of MMC Norilsk Nickel and exercise such rights and discharge such duties reasonably and in good faith.

Qualifications that nominees to the Company's Board of Directors are to meet are set out in the Company's Policy for Development and Approval of Voting Recommendations in respect of the Nominees to the Board of Directors of MMC Norilsk Nickel, which was adopted by a resolution of the Board of Directors (Minutes No. GMK/1-pr-sd of 20 January 2015).

Pursuant to the Directors' Code of Corporate Conduct and Business Ethics, as approved by resolution of the Board of Directors of MMC Norilsk Nickel (Minutes No. 27-pr-sd of 11 September 2014) (the Code): "the Company's Board of Directors is committed to the highest standards of corporate conduct and business ethics. The Board of Directors believes that integrity and good faith of its directors are critical for protecting the interests of the Company and its shareholders."

The Code (Clause 3) sets forth the following key principles of conduct to be followed by the Company's directors:

- integrity and loyalty;
- honesty and fairness;
- professionalism.
- In line with the declared objectives, the Code seeks to:
- help foster the highest ethical standards, integrity and accountability;
- draw attention of the Board of Directors, and each director to potential ethical risks and conflicts of interest;
- provide ethical guidance to directors.

The Code obliges directors (Clause 4) to adopt resolutions ensuring compliance of the Company's employees, officers and other directors with the applicable laws, rules and regulations, as well as corporate policies. The Code's Clause 5 (Conflicts of Interest) sets out typical conflicts of interest that might arise in the Company and should be steered clear of by the directors.

2.4. Directors should be elected in a transparent manner providing shareholders with sufficient information on candidates to get a clear idea of their personal and professional skills. In accordance with the Charter (Clause 6.7), details about the nominees to the Board of Directors shall be included in the information (materials) to be made available to the persons entitled to take part in the General Meeting of Shareholders in preparation for such Meeting.

Pursuant to the Company's Charter (Clause 6.8), the above nominee details shall include:

- full name;
- date of birth;
- education;
- employment record for the last five years;
- record of convictions (if any) for economic crimes and crimes against the government, and administrative prosecution (if any) in business, finance, taxes and duties, and securities;
- number of shares in the Company held by the candidate;
- list of all offices held by the candidate in the management bodies of other legal entities (including full names
  of such legal entities and start dates of the employment contracts);
- compliance with the independent director requirements.

The Board of Directors adopted a resolution (Minutes No. GMK/1-pr-sd of 20 January 2015) approving the Company's Policy for Development and Approval of Voting Recommendations in respect of the Nominees to the Board of Directors of MMC Norilsk Nickel. One of its key objectives is "the introduction of a structured and transparent framework to assess candidates to the Board of Directors."

 It is recommended that independent directors make up at least one third of the elected board members.

It is recommended that an independent director be a person with professional expertise, experience and independence sufficient to have his/her own opinions and make fair unbiased judgements that are not influenced by the company's executive bodies, shareholder groups, or other stakeholders.

It is recommended that an independent director be a person who is not:

- related to the company;
- related to any of the company's substantial shareholders:
- related to any of the company's substantial counterparties or competitors;
- related to the federal and local government or municipal agencies.

Pursuant to Clause 8.3 of the Company's Charter, the Board shall consist of 13 directors.

As at 31 December 2016, the Board had five independent directors.

The Company's independent directors meet the independence criteria set forth in the Corporate Governance Code and effective Listing Rules of the Moscow Exchange.

No.	Key principles and recommendations	Note
2.6.	It is recommended that either an independent director be elected as the chairperson of the board, or a senior independent director be nominated from among the company's independent directors to coordinate their work and liaise with the chairperson.	Gareth Peter Penny, an independent director, was elected Chairman of the Company's Board of Directors.
2.7.	It is recommended that the company's by-laws stipulate the procedure to prepare for and hold board meetings, so that directors have an opportunity to make proper preparations.	On 30 June 2009, the Annual General Meeting of Shareholders approved the Regulation on the Board of Directors of MMC Norilsk Nickel ensuring that the procedure to prepare for and hold Board meetings provides directors with an opportunity to make proper preparations for such meetings.
2.8.	Board meeting notices should provide details on its format and agenda, and be served along with the reference materials early enough for directors to form opinions on the agenda items. The notice period should generally be no less than five calendar days.	Pursuant to Clause 5.9 of the Regulation on the Board of Directors of MMC Norilsk Nickel, a notice of the meeting shall be served on each of the directors by any means necessary to furnish documentary evidence of dispatch within five calendar days prior to the date of the meeting.  The notice shall be accompanied by information (materials) about the meeting's agenda.
2.9.	In case of absentee voting, it is essential to define the procedure and timing for the voting ballots to be dispatched to and collected from each of the directors.	Pursuant to Clause 5.9 of the Regulation on the Board of Directors of MMC Norilsk Nickel, if the Board resolves to hold absentee voting on agenda items, the board meeting notices shall "provide the ballot submission deadline (both time and date) along with the address and other contact details for the dispatch of completed voting ballots."
2.10.	It is recommended that the company's by-laws contain a relevant provision whereby written opinions submitted by directors absent from an in-person board meeting shall be counted in determining the quorum and outcome of the vote on the agenda items.	Pursuant to Clause 5.18 of the Regulation on the Board of Directors of MMC Norilsk Nickel, a director absent, for any given reason, from an in-person meeting may participate in deliberations and vote on the agenda items via a written opinion served by any means necessary to furnish documentary evidence of dispatch. The above opinion shall be counted in determining the quorum and outcome of the vote on the agenda items as long as the Board of Directors receives it prior to the meeting.
2.11.	It is recommended that the company allow directors staying away from the meeting venue to participate in deliberations and vote remotely via conference calls and video conferencing.	Pursuant to Clause 5.17 of the Regulation on the Board of Directors of MMC Norilsk Nickel, directors may participate in meetings held in the form of joint presence by phone, video conference or any other means that make it possible to identify a respective director and hold real-time deliberations on the agenda items. Such participation shall be deemed equivalent to presence in person.
2.12.	It is recommended that an audit committee be set up for preliminary consideration of any matters related to the monitoring of the company's financial and business operations.	The Audit Committee in its composition as of 31 December 2016 was elected by the Company's Board of Directors on 20 June 2016 (Minutes No. GMK/22-pr-sd of 21 June 2016).
2.13.	It is recommended that a remuneration committee be set up for preliminary consideration of any matters related to the development of an efficient and transparent remuneration framework. It is inadvisable that the the remuneration committee be chaired by the board's chairperson.	The Company has a Corporate Governance, Nomination and Remuneration Committee.  The Corporate Governance, Nomination and Remuneration Committee in its composition as of 31 December 2016 was elected by the Company's Board of Directors on 20 June 2016 (Minutes No. GMK/22-pr-sd of 21 June 2016). The Committee is chaired by a person other than the Chairman of the Company's Board of Directors.
2.14.	It is recommended that a nomination (appointment, HR) committee predominantly composed of independent directors be set up for preliminary consideration of any matters related to the board's HR planning (succession planning), expertise and performance.	The Company has a Corporate Governance, Nomination and Remuneration Committee.  The Corporate Governance, Nomination and Remuneration Committee in its composition as of 31 December 2016 was elected by the Company's Board of Directors on 20 June 2016 (Minutes No. GMK/22-pr-sd of 21 June 2016). Out of the five elected Corporate Governance, Nomination and Remuneration Committee members, three are independent directors.
2.15.	It is recommended that the company set up other board committees taking into account the company's scale and risk levels.	In addition to the Audit and Corporate Governance, Nomination and Remuneration Committees, the Company has Budget and Strategy Committees in place.

Note

2.16. The board of directors should provide for assessing its own, along with its committees' and individual members', performance.

The performance should be assessed on a regular basis, at least once a year. To assess the board's performance on an independent basis, it is recommended that an external entity (consultant) be engaged from time to time, but not less than once every three years.

In accordance with the Policy for Assessment of Performance of the Board of Directors of MMC Norilsk Nickel (as adopted by the Company's Board of Directors, Minutes No. GMK/1-pr-sd of 20 January 2015), the assessment shall be as follows:

- assessment based on the Board's performance over the reporting fiscal year and delivered within 90 days
  after the end of the relevant reporting fiscal year (Clause 3.1);
- internal assessment held annually in the form of a survey of the Company's directors; organised by the Company with possible engagement of independent consultants (Clause 4.1.1);
- external assessment conducted at the initiative of the Corporate Governance, Nomination and Remuneration Committee and authorised through a resolution of the Company's Board of Directors; implies engagement of independent consultants (Clause 4.1.2).

#### 3. CORPORATE SECRETARY

3.1. The company should approve an internal regulation on the corporate secretary. The duties and responsibilities of the company's corporate secretary may be performed either by one person, the Corporate Secretary, or by a dedicated business unit headed by the same.

The company should approve an internal regulation on the corporate secretary.

The Company's Board of Directors approved the Regulation on the Corporate Secretary of MMC Norilsk Nickel (Minutes No. GMK/43-pr-sd of 22 April 2015) setting forth the status, duties and powers of the Corporate Secretary, and the status and responsibilities of the Secretariat.

Pursuant to Clause 6.2 of the Regulation, the Corporate Secretary is also Head of the Secretariat. The Company's Corporate Secretary was elected by the Board of Directors (Minutes No. GMK/43-pr-sd of 11 December 2015).

3.2. The corporate secretary should be sufficiently independent of the company's executive bodies and have the necessary powers and resources to perform their duties. Pursuant to the Regulation on the Corporate Secretary of MMC Norilsk Nickel, the Corporate Secretary shall be appointed to and released from their position subject to respective resolutions of the Company's Board of Directors (Clause 3.3).

The Board of Directors may terminate the powers of the Corporate Secretary prior to their expiration (Clause 3.2). The terms and the amount of remuneration of the Corporate Secretary, including the bonus for meeting the KPIs, shall be determined by the Board of Directors and stated in the Corporate Secretary's employment contract (Clause 9.1).

3.3. The corporate secretary should have skills, expertise and qualifications to perform their duties, as well as impeccable reputation, and have the trust of the shareholders.

 $\label{thm:composition} Pursuant to \ Clause \ 2.1 \ of \ the \ Regulation \ on \ the \ Corporate \ Secretary \ of \ MMC \ Norilsk \ Nickel:$ 

- "A person eligible for appointment to the position of the Corporate Secretary shall:
- 2.1.1. have impeccable reputation;
- 2.1.2. have a university degree in Law, Economics, or Business Administration;
- 2.1.3. be fluent in Russian and English;
- 2.1.4. have at least two (2) years of experience in corporate governance or in a management position;
- 2.1.5. have knowledge of the applicable legislation, disclosure standards, rules applied to public companies, etc.;
- 2.1.6. be familiar with international best practices in corporate governance; and
- 2.1.7. have no record of conviction or disqualification under the Russian Code of Administrative Offences."

#### 4. REMUNERATION OF DIRECTORS, EXECUTIVE BODY MEMBERS AND OTHER KEY MANAGERS<sup>1</sup>

4.1 Remuneration paid by the company to its directors, executive body members and other key managers should provide sufficient motivation for their efficient performance enabling the company to recruit and retain competent and skilled professionals. The amount of remuneration paid to the the Company's directors is set out in the Remuneration Policy for the Board of Directors of MMC Norilsk Nickel approved at the Annual General Meeting of Shareholders of 6 June 2014 (Clause 3). In the reporting fiscal year, the resolution to pay remuneration to the Company's directors was adopted at the Annual General Meetings of Shareholders on 13 May 2015 (Minutes No. 1) and on 10 June 2016 (Minutes No. 1).

Qualifications that nominees to the Company's Board of Directors are to meet are set out in the Company's Policy for Development and Approval of Voting Recommendations in respect of the Nominees to the Board of Directors of MMC Norilsk Nickel, which was adopted by a resolution of the Board of Directors (Minutes No. GMK/1-pr-sd of 20 January 2015).

Determination of the remuneration and compensation amounts payable to the members of the Company's Management Board is reserved to the remit of the Board of Directors. Remuneration amounts payable to the members of the Management Board are linked to the Company's financial (EBITDA, free cash flow) and non-financial (lower workplace injury rates, engagement with stakeholders) performance.

<sup>&</sup>lt;sup>1</sup> Key managers of MMC Norilsk Nickel are the members of the Management Board

Note

4.2. The company's remuneration policy should be developed by the remuneration committee and approved by the board of directors of the company.
Supported by the remuneration committee, the board of directors should oversee the introduction and implementation of the remuneration policy in the company, and, where necessary, review and amend it.

Pursuant to Clauses 2.1.5.1 and 2.1.6.1 of the Regulation on the Corporate Governance, Nomination and Remuneration Committee of MMC Norilsk Nickel's Board of Directors, the responsibilities of the Committee shall include: development of the Remuneration Policy for the Company's Board of Directors, Management Board and President, control over adoption and implementation of the Policy and its regular revision, and, pursuant to Clause 2.1.6.2, "development of conditions for early termination of employment contracts with members of the Management Board and the President of the Company, including all of the issuer's financial liabilities and conditions for the discharge thereof."

4.3 The company's remuneration policy should set out transparent procedures to determine the amount of remuneration payable to directors, executive bodies and other key managers of the company, and regulate all types of payments, benefits and privileges available to the above persons.

Remuneration to the directors is paid pursuant to the Remuneration Policy for the Board of Directors of MMC Norilsk Nickel approved by the Company's Annual General Meeting of Shareholders on 6 June 2014. The total remuneration amount payable to the President and members of the Management Board includes a base salary specified in the employment contract and approved by the Board of Directors, and a bonus component. The bonus component of the remuneration is linked to the Company's financial (EBITDA, free cash flow) and non-financial (lower workplace injury rates, engagement with stakeholders) performance. The remuneration amount paid to the members of the Board of Directors and the Management Board shall be disclosed on a regular basis.

Pursuant to Clause 8 of the Remuneration Policy for the Board of Directors, members of the Board of Directors are entitled to an additional privilege, namely directors' liability insurance and the reimbursement by the Company of any expenses the directors may incur due to their election to the Board of Directors.

Pursuant to the Regulation on the Management Board of MMC Norilsk Nickel, during the managers' term in office, the Company may, subject to the resolution of the Board of Directors, enter into agreements to insure members of the Management Board against any civil liability associated with the performance of their duties, as well as agreements for the reimbursement by the Company of any losses the above persons may incur due to the performance of their duties.

In the reporting fiscal year, the resolution to purchase directors' and officers' liability insurance policies for the members of the Board of Directors and the Management Board was adopted by the Company's Annual General Meetings of Shareholders held on 13 May 2015 (Minutes No. 1) and on 10 June 2016 (Minutes No. 1).

4.4 The company has defined its policy on reimbursements (compensations) providing a list of reimbursable expenses and specifying the class of services available to the company's directors, executive body members and other key managersr. Such policy may be included in the company's remuneration policy.

Pursuant to Clause 8.6 of the Company's Charter, during their term in office, directors may, subject to the resolution of the General Meeting of Shareholders, be entitled to remuneration and (or) compensation for expenses related to the performance of their duties, and (or) directors' civil liability insurance policies covering their actions as members of the Board of Directors, and agreements may be be made with them for the reimbursement of any expenses that such directors may incur in connection with the performance of their duties. Pursuant to Clause 5 of the Remuneration Policy for the Board of Directors of MMC Norilsk Nickel, as adopted by the resolution of the Annual General Meeting of Shareholders on 6 June 2014, the expenses shall be reimbursed to directors only if such expenses were incurred due to the directors' engagement in the activities of the Company, the General Meeting of Shareholders, the Board of Directors, Board Committees, or any other process related to the performance by such directors of their obligations towards the shareholders of the Company as part of their membership in the Board of Directors.

The reimbursable expenses include:

- transportation expenses;
- accommodation costs;
- business trips;
- one-off business expenses; and
- other minor expenses related to the performance of the directors' duties.

All expenses submitted by directors for reimbursement shall be related to the Company's operations, incurred in the reasonable course of business and properly documented.

Expenses of executive body members shall be reimbursed in accordance with the regulations on general and administrative expenses approved by the Company.

 Fixed annual compensation should be the preferred form of cash compensation payable to directors.

The fixed compensation amount should reflect the director's expected time and efforts associated with the preparation for and participation in meetings of the board of directors. It is recommended that the fixed compensation amount is graded depending on the director's scope of responsibilities on the board.

The Remuneration Policy for the Board of Directors of MMC Norilsk Nickel approved at the Annual General Meeting of Shareholders on 6 June 2014 (Clause 3) sets forth the annual remuneration for non-executive members as a fixed base salary, a bonus for participating in one of the Board of Directors' committees and a bonus for chairing one of the Board of Directors' committees.

In the reporting fiscal year, the resolution to pay remuneration to directors was adopted at the Company's Annual General Meetings of Shareholders on 13 May 2015 (Minutes No. 1) and on 10 June 2016 (Minutes No. 1).

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#### No. Key principles and recommendations

Note

4.6 Long-term ownership of the company's shares is the best tool to encourage closer alignment between the financial interests of directors and the long-term interests of shareholders. Any restrictions on the right to dispose of shares subject to the company's performance, or directors' participation in the company's stock option plans, are not recommended.

Pursuant to Clause 6 of the Remuneration Policy for the Board of Directors of MMC Norilsk Nickel, as adopted by the resolution of the Annual General Meeting of Shareholders on 6 June 2014, directors are encouraged to invest their funds in the Company's shares to further align the interests of the Company's directors and shareholders in line with the best corporate governance practices.

4.7. Remuneration of executive body members and other key managers should be linked to the company's performance and their personal contribution thereto. Remuneration of executive body members is linked to the Company's performance and their personal contribution thereto.

Order of the CEO No. GMK/127-p dated 3 December 2013 approved the Implementation Plan for the Employee Performance Management System of the Group, which involves:

- iteration and approval of documents setting out employee performance assessment procedures;
- approval of KPIs:
- preparation of individual development plans; and
- assessment of performance by team and individual KPIs.

For the purpose of improving employees' performance by developing and implementing uniform principles and approaches to performance assessment, Order of the CEO No. GMK/100-p dated 3 December 2014 approved the Procedure for assessing performance of the employees in Norilsk Nickel's Head Office.

Pursuant to Clause 4.3 of the Procedure, the objective of the performance assessment shall be "creating a framework for linking the performance assessment result with the remuneration, development, promotion and acknowledgement aspects".

Order of the CEO No. GMK/43-p dated 14 July 2014 approved the Regulation on Bonus Payment to the Employees of Norilsk Nickel's Head Office, according to which the performance assessment in the reporting period is based "on achievement of the team and individual KPIs set forth in the employee's KPI sheet".

For the purpose of improving employee performance in MMC Norilsk Nickel and the Company's Russian subsidiaries, the Procedure for assessing performance of the Group's management was developed (Order of the CEO and Chairman of the Management Board of MMC Norilsk Nickel No. GMK/54-p dated 21 May 2015). Pursuant to Clause 4.1, "performance assessment shall form an integral part of the Employee Performance Management System applied in the Group and shall be implemented by establishing key performance indicators ("KPIs") and assessing their achievement".

Note

#### 5. RISK MANAGEMENT AND INTERNAL CONTROL

5.1. The board of directors should determine the company's risk management and internal control principles and approaches.

Pursuant to the Company's Charter (Clauses 9.3.34 and 9.3.26), the Company's Board of Directors is authorised to:

- identify key risks associated with the Company's operations, and implement relevant risk management initiatives and procedures; and
- approve the internal control system and procedures and the management information system.
   In 2016, the Company's Board of Directors resolved to approve the Risk Management Policy of MMC Norilsk Nickel (Minutes of the Board of Directors No. GMK/17-pr-sd of 27 May 2016). The document defines the principles, rules, requirements and restrictions applying to the Company's risk management arrangements.

The policy defines risk management as a continuous process of identifying, assessing and dealing with risks, which relies on the risk management infrastructure and uniform principles and embraces all business areas and organisational structures of the Company in order to:

- increase the likelihood of achieving the company's goals;
- improve the resource allocation efficiency; and
- boost the Company's investment case and shareholder value.
- Pursuant to the Policy, the Company's risk management shall seek to:
- enhance the risk management infrastructure, including through the development and implementation of risk management policies and procedures;
- integrate the corporate risk management system with the Company's key business processes, including strategic planning and budgeting;
- collect and analyse information on external and internal risk factors that may affect the achievement of the Company's goals:
- aggregate and classify risks for the purposes of their further analysis and assessment;
- select risk response strategies and develop a risk management action plan in order to reduce the probability
  of risks and (or) the degree of risk exposure to an acceptable level (risk appetite and risk tolerance); provide
  risk insurance; and
- implement the risk management action plan and monitor the efficiency of risk management initiatives, etc. Entities and participants involved in the management risk process are structured in a number of levels and include management bodies, business units and employees of the Company and its Russian subsidiaries.

The Policy sets out the Company's risk management principles and formalises risk management rules, requirements and restrictions, including the risk management efficiency criteria.

On 25 August 2016, the Board of Directors resolved to approve the Internal Control Policy (the Policy) of MMC Norilsk Nickel (Minutes of the Board of Directors No. GMK/32-pr-sd). The Policy replaced the Regulation on Internal Control over Financial and Business Performance of MMC Norilsk Nickel adopted back in 2006.

The Policy defines the internal control system (ICS) as a combination of organisational processes, policies and guidelines, control procedures, corporate culture principles and actions taken by the internal control entities to provide reasonable assurance that the Company will achieve its goals, including:

- the effectiveness and efficiency of the Company's business;
- the reliability and accuracy of the Company's financial and management reports; and
- compliance with the applicable laws and the Company's internal regulations.

The objectives of the ICS are as follows:

- create an efficient control environment;
- timely identify and analyse business process risks;
- develop and implement control procedures;
- standardise and streamline control procedures;
- assign responsibility for the implementation of control procedures;
- ensure assets safety and efficient use of resources:
- ensure efficient implementation of control procedures, including those aiming to reduce the Company's exposure to fraud and corruption risks;
- develop a framework for assessing the ICS performance; and
- ensure control over the accuracy of business transactions at all stages of business processes implemented by the Company and its subsidiaries in order to timely prepare and submit the Company's financial and management reports to external and internal recipients.

ICS entities are structured in a number of levels and include the Company's and its subsidiaries' corporate and control bodies, business units and employees, whereas the controlled items (processes, principles, frameworks, tools, and internal control procedures) are arranged as a system made up of several components, including:

- control environment;
- assessment of risks to business processes;
- control procedures;
- information and communications; and
- ICS monitoring.

The Policy sets out the internal control organisation and implementation principles and defines the ICS efficiency criteria

On 30 September 2016, in furtherance of the Policy's provisions, the Company put in place the Internal Control Procedure and the Guidelines for its Implementation.

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5.2. To ensure effective performance of the risk management and internal control framework, it is recommended to establish a separated business unit (units) dedicated to risk management and internal control. In September 2016, following some organisational changes the Company established an Internal Control and Risk Management Unit (Order of the President No. GMK/100-p dated 29 September 2016). The Internal Control Department, the Risk Management Service and the Financial Control Service were included in the unit. The Internal Control Department aims to create an efficient internal control framework that represents a combination of organisational processes, policies and guidelines, control procedures, corporate culture principles and actions that the internal control entities perform to provide reasonable assurance that the Company will achieve its targets; the Department's functions include:

- developing and improving an efficient internal control framework;
- ensuring a consistent approach to the design, operation and development of the internal control framework;
- detecting and preventing any waste, misuse or misappropriation of funds or assets of the Company and the Norilsk Nickel Group subsidiaries, wrongdoings and theft;
- ensuring accuracy of metrics and measurement standards for the control and accounting of metal bearing products:
- arranging and implementing internal controls so as to combat illegal activities, such as money laundering and terrorism financing;
- managing the Corporate Trust Service activities;
- In 2013, the Company launched its Financial Control Service,
- whose key functions, functional reporting line and interaction with the Company's management bodies are governed by the Regulation on the Financial Control Service approved by the Board of Directors;

The Service's key responsibility is reviewing the financial and operational performance of the Company and the Group in order to report to the Company's President (or the authorised representative) and Board members and provide recommendations to the President (or the authorised representative) and the Company's Board of Directors. As part of its activities, the Service drafts reports, recommendations, and other documents and submits those to the Company's President and Board members.

In 2015, the Company launched its Risk Management Service reporting to the Vice-President, who is also Head of the Internal Control and Risk Management Unit (Order of the President No. GMK/100-p dated 29 September 2016) and whose main risk management responsibilities are:

- ensuring methodology support and a consistent approach to the design, operation and development of the internal control framework;
- supervising the development and improvement of the corporate risk management framework, including: improving risks communications, integrating the risk management process into the Company's key business processes, and developing business continuity management processes;
- supervising the collection, review, consolidation and storage of information on risks; Preparing an expert opinion on risk-related information. Drafting reports on the key risks and monitoring the progress of the key risk mitigants.

5.3. The company's risk management framework should include the compliance control function. The Company implements a systematic approach to developing an efficient governance model that helps structure and set up an efficient function to ensure compliance with regulations, standards, internal policies and guidelines through compliance efforts, which include compliance control.

Compliance control is an integral component of the Company's corporate governance and a vital element of its risk management framework.

MMC Norilsk Nickel's Board of Directors resolved to adopt:

- Internal Control Policy (Minutes No. GMK/32-pr-sd dated 25 August 2016);
- Risk Management Policy (Minutes No. GMK/17-pr-sd dated 26 May 2016).

The Corporate Relations Department ensures a uniform comprehensive approach to compliance risk management pursuant to the Regulation on the Department (Order of the President No. GMK/50-p dated 24 May 2016)

As part of the compliance control implementation, the Department is responsible for:

- coordinating and helping develop internal measures and procedures to identify and manage compliance risks in a timely and efficient manner;
- coordinating the process of identifying the Company's inherent compliance risks;
- developing compliance risk mitigation methodologies.

5.4. The company is recommended to prepare an action plan for preventing corruption, mitigating reputational risks and risks of sanctions for bribery that might be imposed on the company, approve the anti-corruption policy specifying measures to develop anticorruption elements of the corporate culture and organisational structure, as well as respective rules and regulations.

Having joined the Anti-Corruption Charter of the Russian Business (the "Charter"), the Company introduces dedicated anti-corruption programmes based on the Charter and set forth in the Company's Anti-Corruption Policy. In January 2016, the Company confirmed compliance with the Charter and secured its position on the Charter's Register.

In November 2016, the Company joined the United Nations Global Compact, which aims to promote recognition and practical application of ten basic principles of human rights, labour, environment and anti-corruption by businesses worldwide.

In order to effectively combat corruption, the Company has developed and approved the following anticorruption regulations:

- Code of Business Ethics;
- Directors' Code of Corporate Conduct and Business Ethics;
- Anti-Corruption Policy;
- Regulation on Procurement Procedures;

Standard anti-corruption agreement - appendix to the employment contract;

- Regulation on Information Security;
- Regulation on the Prevention and Management of Conflicts of Interest;
- Regulation on Business Gifts;
- Procedure of Anti-Corruption Due Diligence on Internal Documents.

To develop anti-corruption measures and preventive procedures, the Company has assigned a dedicated business unit - the Corporate Relations Department.

Following the laws and voluntary obligations, the Company is introducing dedicated anti-corruption programmes focusing on both Norilsk Nickel internal affairs and its relations with business partners and the government, ensurina:

- timely detection and prevention of conflicts of interest, including through making candidates applying for vacant positions or the Company's employees fill a declaration form for reporting conflicts of interest
- recording and monitoring hospitality expenses. The Company has established criteria for acceptable business gifts and implements uniform requirements for all employees on presenting and accepting business gifts;
- anti-corruption due diligence on internal documents to verify compliance with anti-corruption requirements and eliminate any corruption drivers;
- effective work of the Corporate Trust Service (CTS), which provides prompt response to reports of violations, abuses and embezzlement;
- counterparty due diligence to confirm their reliability, solvency and financial stability;
- transparent procurement procedures. The Company runs Tender and Investment Committees whose main focus is to make the Group's procurement and investment more efficient and transparent;
- implementation of actions to prevent unauthorised use of insider information. The Company maintains an insider list, reviews transactions, internal documents and events in order to ensure compliance with the domestic and international laws;
- ongoing staff training on anti-corruption matters. In August 2016, the Group launched the On Preventing Corruption distance learning course;
- anti-corruption monitoring. In December 2016, the Company held an anonymous survey among the employees in order to get their opinion on corruption in the Company and its anti-corruption performance.
- corruption prevention measures to make employees aware of the possible consequences and the "inevitability of penalty" not only for those who engage in corruption, but also for those who become aware of corruption and do not report (conceal) it. All Company employees sign an agreement setting out their respective obligations.
- functioning of the Preventing and Fighting Corruption page on the corporate website and the Company's intranet portal. The page contains information on the Company's anti-corruption policies and efforts. In its government relations, the Company, its employees and corporate bodies comply with the applicable laws

(including anti-corruption laws).

All of the above measures are implemented in the Company and its standalone business units, and are also recommended to its subsidiaries.

5.5. It is recommended to set up a safe, confidential and easily accessible communication channel (hotline) for informing the members of the board (the board's audit committee) and the internal audit department of any breaches of law, the company's internal procedures or code of ethics by any employee and/or member of the management body or an authority performing control over the company's business and financial operations.

In February 2010, the Company launched its Corporate Trust Service (CTS), which provides prompt response to reported violations, abuses and embezzlement; Employees, shareholders and other stakeholders have an opportunity to report any actions that will or might result in financial damages or be detrimental to the business reputation of the Company. The key principles underlying the Corporate Trust Service include guaranteed confidentiality for whistleblowers and timely and unbiased consideration of all reports. To make a report, anyone is invited to call a toll-free hotline available 24/7: +7 800 700 1941, +7 800 700 1945, or e-mail to: skd@nornik.ru. CTS functions in compliance with the Procedure on the Corporate Trust Service of MMC Norilsk Nickel, which was approved by the President's Order No. GMK/21-p dated 14 March 2016. Directors' Code of Corporate Conduct and Business Ethics approved by the Board of Directors (Minutes No. 27-pr-sd dated 11 September 2014) sets forth the channels for informing the Service of the identified and potential violations of ethical standards. Pursuant to Clause 11 of the Code, "retaliation in any form against an individual who reports a suspected violation in good faith, even if the report is mistaken, or who assists in the investigation of a reported violation, is not permitted".

Note

5.6. The company should have a board-approved internal audit policy (regulation on internal audit) specifying internal audit goals, objectives and functions.

The Board of Directors approved the Regulation on the Internal Audit Department (Minutes No. GMK/49-pr-sd dated 26 December 2016), which complies with the the Corporate Governance Code recommendations for the Internal Audit Policy.

In order to ensure unbiased approach and independence of the Department Director, they are administratively subordinate to the Company's President and functionally subordinate to the Company's Board of Directors via the Audit Committee (see 1.3).

The Department aims to:

maintain and increase the Company's value by conducting impartial and unbiased audits, which also assess
the performance of internal control and risk management at the Company and its subsidiaries,

The Internal Audit Department is charged with:

- checking whether the goals of business units, projects and transactions correspond with the Company's goals;
- assessing the efficiency, reliability and integrity of business processes and information systems, including the reliability of procedures for combating fraudulent behaviour, abuses and corruption;
- verifying compliance with the laws, Charter and internal regulations;
- checking whether resources are used effectively and appropriately;
- checking whether the internal control framework mitigates business process risks to an acceptable level.
- assessing the adequacy of the risk management framework, checking whether the risks are identified adequately and correctly, and assessing the performance of risk management measures;
- identifying development areas for the Company's units;
- developing proposals for improving performance and mitigating risks.

The Internal Audit Department issues reports, recommendations and other documents submitted to the heads of the Company's business units and departments, and to the President of MMC Norilsk Nickel. The Internal Audit Department regularly submits performance reports to the Board's Audit Committee.

#### 6. DISCLOSURE OF INFORMATION ABOUT THE COMPANY AND ITS INFORMATION POLICY

6.1. The company should develop and implement an information policy that ensures effective exchange of information between the company, its shareholders, investors, and other stakeholders. The Board of Directors approved (Minutes No. GMK/11-pr-sd of 21 May 2009) the Information Policy Regulation of MMC Norilsk Nickel, which defines the key principles of the Company's Information Policy, lists information and documents to be disclosed to all stakeholders within the scope required to make a well-informed decision on participating in the Company or performing other actions that can affect the Company's financial and business operations, and sets forth the procedure for providing information and documents, which ensures effective information exchange between the Company and its stakeholders.

6.2. The company's information policy should be implemented by corporate executive bodies. Control over compliance with the information policy should be exercised by the company's board of directors.

The company's information policy should be implemented by corporate executive bodies. Control over compliance by companies with the Clause 6.6 of the Company's Information Policy Regulation, "business units responsible for information disclosure, as well as the Company's employees authorised to comment on the disclosed information, shall be appointed by the Company's CEO".

Pursuant to Clause 9.3.35 of the Charter, approving the policy on the public and investor relations is within the competence of the Company's Board of Directors.

- 6.3. Along with the information required by the applicable law, the company should additionally disclose:
  - information on the mission, strategy, corporate values, company objectives and adopted policies;
     on the Company's financial position corporate website (www.nornik.ru).
  - additional information on the company's financial performance and financial position;
  - information on the company's capital structure;
  - information on the company's social and environmental responsibility.

The Company reflects the most significant information in its annual reports, corporate social responsibility reports and sustainability reports prepared in accordance with the GRI guidelines.

The Company also discloses information on its mission and strategy, adopted Policies, additional information on the Company's financial position, and information on the its social and environmental responsibility on the

6.4. The company should disclose information on its corporate governance, including the details on its compliance with the principles and recommendations set out in the Code. Information on the Company's executive bodies, Board of Directors and its committees, as well as the corporate governance overview is disclosed on the Company's website (www.nornik.ru). Information on compliance with the key principles and recommendations of the Corporate Governance Code is disclosed in the Company's annual reports (starting from the 2014 Annual Report).

Note

6.5. If foreign investors hold a substantial share of the company's capital, the company should, along with disclosure of information in Russian, disclose this information (including notices of general meetings, annual reports, and financial (accounting) statements) in a foreign language generally accepted in the financial market, and provide free access to such information.

All relevant information on the Company's operations is disclosed in English on the Company's website (www. nornik.ru).

6.6. The company should provide information and documents requested by its shareholders in accordance with the principle of equal and unhindered accessibility. One of the key principles of the Company's information policy is equality, ensuring equal rights and opportunities to receive information for all stakeholders, unless otherwise provided by the applicable laws of the Russian Federation. As prescribed by the applicable legislation, the Company seeks to provide stakeholders with free, easy and simple access to disclosed information and documents.

The shareholders' access to information (documents) and the procedure for providing them with copies of the documents are set forth in Clause 7 of the Company's Information Policy Regulation.

Information on the procedure for providing copies of Norilsk Nickel's documents upon request of shareholders and other stakeholders is published on the Company's website www.nornik.ru in the Internal Documents section.

#### 7 MATERIAL CORPORATE ACTIONS

7.1. Material corporate actions shall include:

- reorganisation of the company;
- acquisition of at least 30% of the company's voting shares (takeover);
- material transactions entered into by the company;
- increase or reduction in the company's authorised capital;
- listing and delisting of the company's shares:
- other actions which may result in material changes in the rights of shareholders or be against their interests

It is recommended that the company's charter include a list (criteria) of transactions or other actions deemed to be material corporate actions and refer them to the remit of the board of directors

Pursuant to the Company's Charter, the Board of Directors shall be authorised to consider most of the matters related to the corporate actions and qualified by the Corporate Governance Code as material.

Pursuant to Clause 7.4 of the Company's Charter, the General Meeting of Shareholders shall only pass resolutions to reorganise the Company, increase or reduce its authorised capital, and approve major or related-party transactions at the behest of the Board of Directors.

Pursuant to Clause 9.3.28 of the Company's Charter, the adoption of resolutions seeking to list the Company's shares and/or convertible issue-grade securities shall be referred to the remit of the Board of Directors. Pursuant to Clause 7.1.15 of the Company's Charter, the adoption of resolutions seeking to delist the Company's shares shall be referred to the remit of the General Meeting of Shareholders.

The Company's Charter (Clauses 9.3.15, 9.3.21, 9.3.30, 9.3.33 and 9.3.39) sets out transaction criteria which refer certain transactions (subject to their materiality to the Company) to the remit of the Board of Directors.

7.2. It is recommended that the company's charter formalise a procedure to refer transactions that do not meet the statutory major transaction criteria but are nonetheless material for the company to the remit of the board of directors. Such transactions should be subject to the statutory requirements imposed on the company's other major transactions and/or referred to the remit of the board of directors and approved by at least a three-quarter majority or an absolute majority of votes held by all the elected directors (save for the former ones).

The Company's Charter (para. 2 of Clause 8.10) sets out a procedure to refer transactions that do not meet the statutory major transaction criteria to the remit of the Board of Directors. Resolutions on such transactions shall, due to their materiality to the Company, be adopted at a Board of Directors meeting by at least ten votes (i.e. by a three-quarter majority of votes).

Among others, such transactions shall include:

- transactions involving acquisition, disposal, or encumbrance of any securities (including the Company's shares), if their market value exceeds the equivalent of USD 5 m at the exchange rate announced by the Bank of Russia on the transaction approval date (Clause 9.3.15);
- transactions involving the Company's shareholder who holds, independently or jointly with their affiliates, at least 5 % of the Company's voting shares (Clause 9.3.21);
- any transactions (except for those entered into in the normal course of the Company's business) with a total
  value or value of the acquired or disposed property exceeding the equivalent of USD 20 m at the exchange
  rate announced by the Bank of Russia on the transaction approval date (Clause 9.3.30);
- any transactions (including those entered into in the normal course of the Company's business) with a total
  value or value of the acquired or disposed property exceeding the equivalent of USD 200 m at the exchange
  rate announced by the Bank of Russia on the transaction approval date (Clause 9.3.33);
- any transactions involving acquisition and/or disposal of enterprises and any other businesses (except for securities or stakes) incorporated and/or located outside of the Russian Federation, if the market value of such property exceeds the equivalent of USD 5 m at the exchange rate announced by the Bank of Russia on the transaction approval date (Clause 9.3.39).

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### Principles and recommendations that are not complied with or complied with in part

Corporate governance principle(s) or key criterion (recommendation) Brief description of non-compliance with the corporate governance principle or key criterion

Explanation of the key reasons, factors and circumstances due to which the principle or key criterion is not complied with or is complied with in part, the description of corporate governance alternative mechanisms and instruments

The board of directors should establish an audit committee made up of independent directors. Its responsibilities should be set forth in the company's procedures and be compliant with recommendations of the Corporate Governance Code.

Out of the five elected Audit Committee members, three are independent directors.

The current version of the Listing Rules of the Moscow Exchange for issuers whose shares are included in the First Level quotation list says that the audit committee and the remuneration committee must be composed of independent directors, and if compliance with this requirement is reasonably impossible, then independent directors should make up a majority of the committee, while the rest of the positions are to be filled by members of the board of directors who are not the sole executive bodies and/or members of the company's collegial executive body. These requirements are reflected in the current versions of the Company's by-laws: Regulation on the Audit Committee and Regulation on the Corporate Governance, Nomination and Remuneration Committee.

The board of directors should establish a compensation committee made up of independent directors, which may be combined with the nomination/ members, three are HR committee. Its responsibilities should be set forth in the company's procedures and be compliant with recommendations of the Corporate Governance Code.

Out of the five elected Corporate Governance, Nomination and Remuneration Committee independent directors.

Having only independent directors on those committees is reasonably impossible due to

In accordance with the Company's by-laws, the Board of Directors must consist of 13 people. The Board of Directors elected by the Annual General Meeting of Shareholders on 10 June 2016 includes five independent directors. The Company has four committees of the Board of Directors, each of them consisting of five members. In accordance with the Regulations on the committees, each committee must have independent directors, which makes it impossible to have the Corporate Governance, Nomination and Remuneration Committee and the Audit Committee composed solely of independent directors A number of corporate governance mechanisms developed and implemented by the Company ensure that the committees remain efficient, and their recommendations are impartial and independent. These mechanisms, among other things:

- The corporate secretary should hold no concurrent positions in the company. Their responsibilities should be compliant with recommendations of the Corporate Governance Code. The corporate secretary should have sufficient resources to discharge their duties.
- The Corporate Secretary holds concurrent positions in MMC Norilsk Nickel.
- set strict shortlisting criteria for nominees to the Board of Directors (including requirements for impeccable professional and personal reputation);
- hold all members of the Board of Directors to the highest standards of corporate conduct and professional ethics:
- instruct to avoid situations that put (or may put) the personal interest of the Board of Directors member at odds with the Company's interests:
- set forth a transparent mechanism for assessing both the members and the entirety of the Board of Directors.

These corporate governance mechanisms and instruments have been implemented in the Company through the Board of Directors approving the following internal documents:

- Policy for Development and Approval of the Voting Recommendations in Respect of the Nominees to the Board of Directors;
- Directors' Code of Corporate Conduct and Business Ethics;
- Policy for assessing the Board of Directors performance.

Pursuant to Clause 3.6 of the Regulation on the Management Board of MMC Norilsk Nickel: "The Management Board Secretary provides organisational and information support to the Management Board. The duties of the Management Board's Secretary are carried out by the Corporate Secretary."

Pursuant to Clause 3.5 of the Regulation on the Audit, Budget and Strategy Committee and Clause 3.4 of the Regulation on the Corporate Governance, Nomination and Remuneration Committee, "the Corporate Secretary shall carry out the duties of the Committee's Secretary".

In practice, concurrently holding the above-mentioned positions does not create conflict of interest, nor does it affect the Corporate Secretary's overall efficiency.

**Acid leaching.** Leaching with (solutions of) acids as reagents.

**Agglomerate.** Sintered ore produced as a result of the agglomeration process.

**Agglomeration.** A method for forming relatively large porous blocks (agglomerates) by sintering (roasting) fine or powder ore, where solid particles are joined together by solidifying fusible compounds.

**Anode.** Crude metal (nickel or copper) obtained from anode smelting and fed for electrolytic refining (electrolysis) whereby it is dissolved.

**Cake.** Solid residue from filtering pulp during leaching of ores, concentrates or metallurgical intermediates, and purification of processing solutions.

**Cathode.** Pure metal (nickel or copper) obtained as a result of electrolytic refining of anodes.

**Concentrate.** A product of ore concentration with a high grade of the extracted mineral, which gives its name to the concentrate (copper, nickel, etc.).

**Concentration.** Artificial improvement of metallurgical feedstock mineral grades by removal of a major portion of waste rock not containing any valuable minerals.

**Conversion.** An autogenous pyrometallurgical process where ferrous and other detrimental impurities are oxidised and removed as slag to produce blister copper (in copper concentrate smelting) or converter matte (in copper-nickel concentrate smelting).

**Converter matte.** A metallurgical intermediate produced as a result of matte conversion. Depending on the chemical composition, the following types of converter matte are distinguished: copper, nickel and copper-nickel.

**Cuprous ores.** Ores containing 20% to 70% sulphides, with the following metal grades: 0.2–2.5% for nickel, 1.0–15.0% for copper, 5–50 g/t for platinum group metals.

**Disseminated ores.** Ores containing 5% to 30% sulphides, with the following metal grades: 0.2–1.5% for nickel, 0.3–2% for copper, and 2–10 g/t for platinum group metals.

**Drying.** Removal of moisture from concentrates performed in designated drying furnaces (to a moisture level below 9%).

**Electrolysis.** A series of electrochemical reduction-oxidation reactions at electrodes immersed in an electrolyte as a result of passing of an electric current from an external source.

**Filtration.** The process of reducing the moisture level of the pulp by forcing it through a porous medium.

Flash smelter. An autogenous smelter for processing dry concentrates, where the smelted substance is finely ground feedstock mixed with a gaseous oxidiser (air, oxygen), which holds melted metal particles suspended. The heat from oxidation reactions is actively used in the process.

**Flotation.** A concentration process where specific mineral particles suspended within the pulp attach to air bubbles. Poorly wettable mineral particles attach to the air bubbles and rise through the suspension to the top of the pulp, producing foam, while well wettable mineral particles do not attach to the bubbles and remain in the pulp. This is how the minerals are separated.

**Leaching.** Selective dissolution of one or several components of the processed solid material in organic solvents or water solutions of inorganic substances.

**Matte.** Intermediate product in the form of an alloy of sulphides of iron and non-ferrous metals with a varying chemical composition. Matte is the main product accumulating precious metals and metal impurities the feedstock contains.

**Metal extraction.** The ratio between the quantity of a component extracted from the source material and its quantity in the source material (as a percentage or a fraction).

**Metal grade.** The ratio between the weight of metal in the dry material and the total dry weight of the material expressed as a percentage or grammes per tonne (g/t).

Mine. A mining location for extraction of ores.

**Mineral deposit.** A mass of naturally occurring mineral material (near to the surface or deeper underground) which is economically valuable in terms of quantity, quality and conditions.

**Ore mixture.** A mixture of materials in certain proportions needed to achieve the required chemical composition of the end product. The ore mixture for metallurgical production may include ores, ore concentrates and agglomerates, return slag, dust from dust collectors, and metals (mostly in the form of scrap).

**Ore.** Natural minerals containing metals or their compounds in economically valuable amounts and forms.

**Oxide.** A compound of a chemical element with oxygen.

**Proven ore reserves.** Estimated based on the economically mineable part of measured mineral resources, including possible dilution and losses during mining operations.

**Probable ore reserves.** Estimated based on the economically mineable part of indicated and, in some circumstances, measured mineral resources, including possible dilution and losses during mining operations.

**Pulp.** A mixture of finely ground rock with water or a water solution.

**Pyrometallurgical processes.** Metallurgical processes performed at high temperatures, including roasting, smelting and conversion, which are distinguished depending on their technological characteristics.

**Refinement.** The process of extracting high purity precious metals through their separation and removal of impurities.

**Rich ores.** Ores with high sulphide content (over 70%) and the following metal grades: 2–5% for nickel, 2–25% for copper, and 5–100 g/t for platinum group metals.

Roasting. The process of removing volatile components from and changing the chemical composition of materials (ores, concentrates, etc.) performed at elevated temperatures enabling various gas-solid reactions but insufficient to cause melting of the material's solid compounds.

Shop area. A part of a (metallurgical) shop.

Slag. Melted or solid substance with a varying composition that covers the surface of a liquid product during metallurgical processes (resulting from ore mixture melting, melted intermediate processing and metal refining) and includes waste rock, fluxes, fuel ash, metal sulphides and oxides, and products of interaction between the processed materials and lining of melting units.

**Sludge.** Powder product containing precious metals settling during electrolysis of copper and other metals.

**Smelting.** A pyrometallurgical process performed at high temperatures enabling the complete melting of the processed material.

Sulphides. Compounds of metals and sulphur.

**Tailings pit.** A complex of hydraulic structures used to receive and store mineral waste / tailings.

**Tailings.** Waste materials left over after concentration processes and containing mostly waste rock with a minor amount of valuable minerals.

**Thickening.** Separation of liquid (water) and solid particles in dispersion systems (pulp, suspension, colloid) based on natural gravity settling of solid particles in settlers and thickeners, or centrifugal settling of solid particles in hydrocyclones.

**Underground (subsurface) mining.** A set of stripping, preparatory and stoping operations.

Vanyukov furnace. An autogenous smelter for processing concentrates, where smelting is performed in a bath of slag and matte, with intensive injection of air-oxygen mixture. The heat from oxidation reactions is actively used in the process.

## METRIC CONVERSION TABLE AND CURRENCY EXCHANGE RATES

#### METRIC CONVERSION TABLE

Length		Area		Weigth	
1 km	0.6214 mi	1 sq m	10.7639 sq ft	1 kg	2.2046 lb
1 m	3.2808 ft	1 sq km	0.3861 sq mi	1 metric tonne	1,000 kg
1 cm	0.3937 in	1 ha	2.4710 acres	1 short tonne	907.18 kg
1 mi	1.609344 km	1 sq ft	0.09290304 sq m	1 troy ounce	31.1035 g
1 foot	0.3048 m	1 sq m	2.589988 sq km	1 lb	0.4535924 kg
1 in	2.54 cm	1 acre	0.4046873 ha	1 g	0.03215075 oz t

#### CURRENCY EXCHANGE IN 2012–2016

This appendix provides currency exchange rates used to convert expenses denominated in RUB to USD.

RUB / USD	2012	2013	2014	2015	2016
Average rate for the year ended 31 December	31.09	31.85	38.42	60.96	67.03

# INFORMATION ON TRANSACTIONS OF PJSC "MMC "NORILSK NICKEL"

Transactions with interested party and major transactions consummated in 2016, please see on the Company's website





http://www.nornik.ru/assets/files/2016/deals\_2016\_2.pdf

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#### **REGISTRAR**

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Russian Federal Securities Commission license number 045-13954-000001,

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Presnenskaya Naberezhnaya

#### **DISCLAIMER**

This annual report (Annual Report) has been prepared based on the information available to MMC Norilsk Nickel and its subsidiaries as at the issue date. The Company believes that the information provided in this Annual Report is complete and accurate as at the Annual Report publication date. However, the Company does not assert that this information will not be updated or corrected in the future.

This Annual Report may include certain forward-looking statements with respect to the Group's operations, economic indicators, financial position, results of operating and production activities, its plans, projects and expected results, as well as trends related to commodity prices, production and consumption volumes, costs, estimated expenses, development prospects,

useful lives of assets, reserve estimates and other similar factors and economic projections with respect to the industry and markets, start and completion dates of certain geological exploration and production projects, and liquidation or disposal of certain entities.

The Company neither confirms nor guarantees that the results indicated in the forward-looking statements will be achieved.

The Company accepts no responsibility for any losses that may be incurred by any individual or legal entity acting in reliance on the forward-looking statements.