

MINERAL RESOURCE BASE

Resources and reserves as of 31 december, 2020¹

Ore kt

NORILSK NICKEL GROUP

TOTAL PROVEN AND PROBABLE RESERVES	742,833
TOTAL MEASURED AND INDICATED RESOURCES	2,018,551
TOTAL INFERRED RESOURCES	575,384

TAIMYR PENINSULA

Proven and probable reserves	663,128
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Proven reserves

Talnakh ore field, including	315,314
rich	50,942
cuprous	14,735
disseminated	249,637
Norilsk-1 deposit (disseminated ore)	18,666

Probable reserves

Talnakh ore field, including	307,493
rich	73,441
cuprous	64,185
disseminated	169,867
Norilsk-1 deposit (disseminated ore)	21,655

Measured and indicated resources	1,702,906
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Talnakh ore field, including	1,546,330
rich	107,875
cuprous	66,870
disseminated	1,371,585
Norilsk-1 deposit (disseminated ore)	156,576

Inferred resources	433,234
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Talnakh ore field	433,234
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KOLA PENINSULA (disseminated ore)

Proven and probable reserves	79,705
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Proven ore reserves	40,578
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Probable reserves	39,127
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Measured and indicated resources	315,645
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Inferred resources	142,150
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Metal grade						Contained metal					
Ni %	Cu %	Pd g/t	Pt g/t	Au g/t	6 PGM g/t	Ni kt	Cu kt	Pd koz	Pt koz	Au koz	6 PGM koz
0.88	1.56	3.71	0.98	0.21	4.93	6,530	11,590	88,606	23,491	5,115	117,681
0.69	1.14	2.96	0.84	0.18	3.98	13,828	22,989	191,932	54,292	11,494	258,127
0.79	1.38	3.17	0.82	0.19	4.15	4,537	7,915	58,684	15,256	3,540	76,695
0.91	1.71	4.15	1.10	0.24	5.51	6,036	11,347	88,533	23,443	5,092	117,558
0.80	1.51	3.69	0.99	0.22	4.88	2,513	4,756	37,365	10,080	2,219	49,448
2.56	3.12	6.03	1.25	0.23	7.58	1,302	1,589	9,874	2,043	383	12,415
0.94	3.76	9.22	2.23	0.62	11.59	139	554	4,368	1,056	292	5,488
0.43	1.05	2.88	0.87	0.19	3.93	1,072	2,613	23,123	6,981	1,544	31,545
0.35	0.51	3.87	1.58	0.17	5.72	65	95	2,322	950	104	3,434
1.10	2.09	4.64	1.13	0.27	6.09	3,397	6,417	45,859	11,207	2,635	60,197
2.91	4.03	7.42	1.46	0.27	9.51	2,137	2,959	17,512	3,438	628	22,453
0.75	3.06	6.86	1.79	0.49	8.87	484	1,967	14,147	3,689	1,017	18,294
0.46	0.88	2.60	0.75	0.18	3.56	776	1,491	14,200	4,080	990	19,450
0.28	0.36	4.29	1.73	0.19	6.43	61	79	2,987	1,206	134	4,479
0.68	1.29	3.50	0.99	0.21	4.70	11,658	21,934	191,461	53,990	11,322	257,295
0.73	1.38	3.50	0.95	0.21	4.66	11,213	21,368	174,034	47,311	10,612	231,715
3.25	4.30	8.05	1.61	0.30	10.24	3,504	4,635	27,907	5,586	1,029	35,530
0.96	3.89	8.88	2.28	0.63	11.41	644	2,601	19,087	4,892	1,350	24,522
0.52	1.03	2.88	0.84	0.19	3.89	7,065	14,132	127,040	36,833	8,233	171,663
0.28	0.36	3.46	1.33	0.14	5.08	445	566	17,427	6,679	710	25,580
0.84	1.73	4.20	1.09	0.25	5.48	3,641	7,474	58,500	15,135	3,480	76,375
0.84	1.73	4.20	1.09	0.25	5.48	3,641	7,474	58,500	15,135	3,480	76,375
0.62	0.30	0.03	0.02	0.01	0.05	494	243	73	48	23	123
0.58	0.25	0.03	0.02	0.01	0.05	236	101	37	27	11	66
0.66	0.36	0.03	0.02	0.01	0.05	258	142	36	21	11	57
0.69	0.33	0.05	0.03	0.02	0.08	2,170	1,055	471	302	172	832
0.63	0.31	0.04	0.03	0.01	0.07	896	441	184	121	60	320

¹ Excluding deposits in Zabaykalsky Region. 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). The six platinum group metals (PGMs) are platinum, palladium, rhodium, ruthenium, osmium, and iridium. The four elements are platinum, palladium, rhodium, and gold.



Nornickel boasts a unique mineral resource base of Tier 1 assets in Russia, on the Taimyr and Kola Peninsulas and in the Zabaykalsky Region. Nornickel's continued focus on replacing and expanding its resource base is essential to its long-term development.

Ore reserves at Zabaykalsky division at year-end – 301 mln t, average metal content: Cu – 0.7%, Fe in magnetite concentrate – 22.4%, Au – 0.84 g/t¹. Reserves life: 31 years.

>75 years
of resources at the current
production rate

RESOURCES AND RESERVES

Item ²	2018	2019	2020
Proven and probable reserves			
Ore, mln t	785	757	743
Nickel, mln t	6.9	6.7	6.5
Copper, mln t	12.1	11.9	11.6
PGMs, Moz	123	120	118
Measured and indicated resources			
Ore, mln t	2,209	2,193	2,019
Nickel, mln t	15.3	15.2	13.8
Copper, mln t	23.5	23.2	23.0
PGMs, Moz	263	260	258

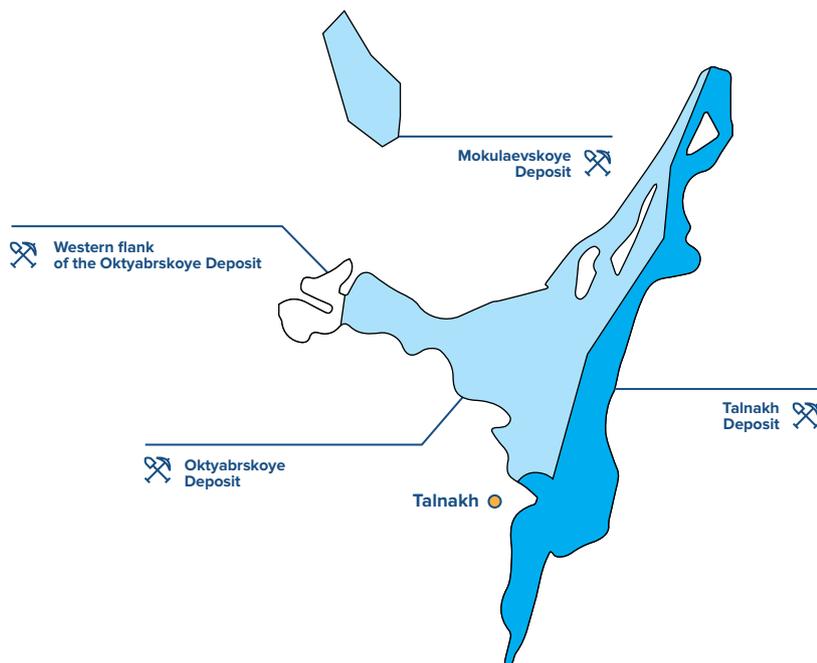
¹ According to the Russian classification (A + B + C1 + C2).

² Data on mineral resources and ore reserves are based on the JORC Code, exclude GRK Bystrinkoye's deposits. The 2018–2019 data include the Honeymoon Well project.

EXISTING DEPOSITS

Nornickel is well-positioned to maintain a high level of economic ore reserves given the significant mineral resources within its existing deposits. The depleted proven and probable reserves at the existing mines are replaced through the development of measured, indicated and inferred resources. The Company plans to ramp up its production by tapping into new rich ore deposits and gradually developing disseminated and cuprous ore horizons.

TALNAKH ORE CLUSTER



The Talnakh ore cluster is located in the Norilsk Industrial District in the north of the Krasnoyarsk Region, on the right bank of the Norilskaya River. Geologically, the Talnakh ore cluster is located on the north-western margin of the Siberian

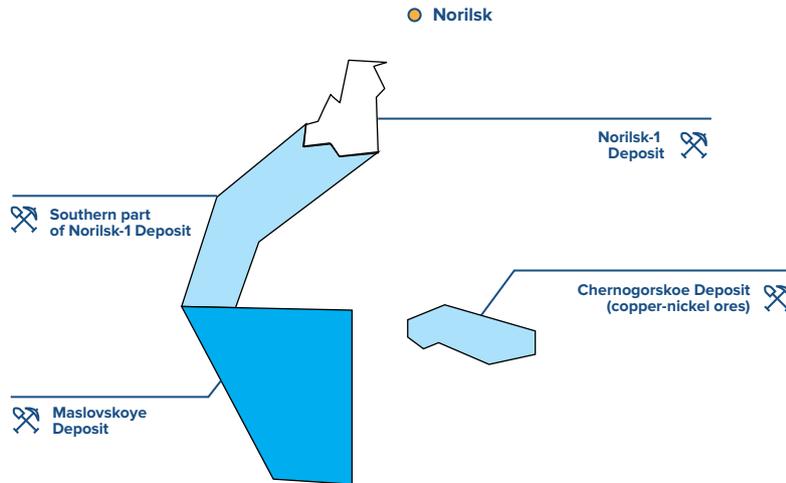
Craton and includes the world's largest Oktyabrskoye and Talnakhskoye copper-nickel deposits. In the early 1960s, multiple deposits of high-grade, cuprous and disseminated ores were discovered within the area. Nornickel is still well

supplied with base and noble metals from the uniquely rich and vast resource base of the Talnakh ore cluster developed through mining operations of its Polar Division.

RESERVES AND RESOURCES

Item	Ore	Nickel	Copper	PGMs
Proven and probable reserves (according to the JORC Code)	622.8 mln t	5.9 mln t	11.2 mln t	109.6 Moz.
Measured and indicated resources (according to the JORC Code)	1,546.3 mln t	11.2 mln t	21.4 mln t	231.7 Moz
Balance reserves	1,979.6 mln t	14.9 mln t	28.8 mln t	308.1 Moz.
Balance metal reserves involved in 2020	14.4 mln t	265.6 kt	464.8 kt	4.5 Moz.
Balance reserves growth in 2020	3.0 mln t	66.6 kt	106.3 kt	1.0 Moz
Average metal content	–	2.22%	3.54%	10.27 g/t

NORILSK ORE CLUSTER



The Norilsk ore cluster (NID) is also located in the Norilsk Industrial District. Brownfields within the NID include the northern part of the Norilsk-1 deposit producing disseminated copper and nickel sulphide ores since the 1930s. In 2020, the deposit was reassessed against new permanent exploratory standards for open-pit and underground mining. A feasibility study of permanent exploratory standards and a reserve statement for the Norilsk-1

deposit (northern part) were approved by the State Commission for Mineral Reserves of the Russian Ministry of Natural Resources and included into the State Register of Mineral Reserves (Minutes No. 6557 dated 20 May 2020).

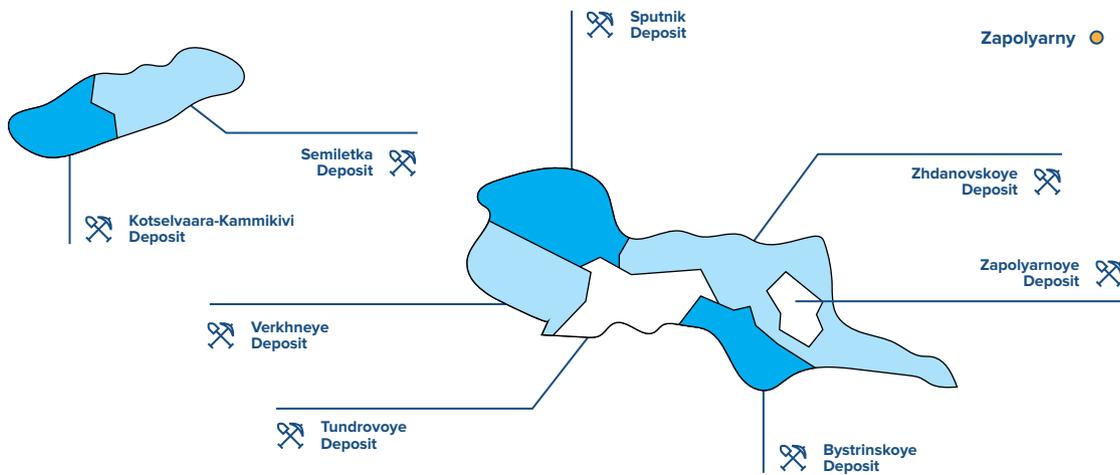
To raise additional external investments in brownfield expansion in the northern part of the Norilsk-1 deposit, Nornickel has launched the South Cluster

project. A licence to develop Norilsk-1 and also some of the Polar Division's assets were transferred to Medvezhy Ruchey, a wholly owned subsidiary established specifically to implement the expansion project. Medvezhy Ruchey includes Norilsk Concentrator, an open-pit and an underground mine at Zapolyarny Mine, and tailing dumps No. 1 and Lebyazhye.

RESERVES AND RESOURCES

Item	Ore	Nickel	Copper	PGMs
Proven and probable reserves (according to the JORC Code)	40.3 mln t	0.1 mln t	0.2 mln t	7.9 Moz
Measured and indicated resources (according to the JORC Code)	156.6 mln t	0.4 mln t	0.6 mln t	25.6 Moz
Balance reserves	156.6 mln t	0.4 mln t	0.6 mln t	25.6 Moz
Balance metal reserves involved in 2020	1.6 mln t	6.8 kt	8.3 kt	0.3 Moz
Balance reserves growth in 2020	11.5 mln t	20.2 kt	21.2 kt	1.4 Moz.
Average metal content	–	0.18%	0.18%	3.91 g/t

KOLA MMC DEPOSITS



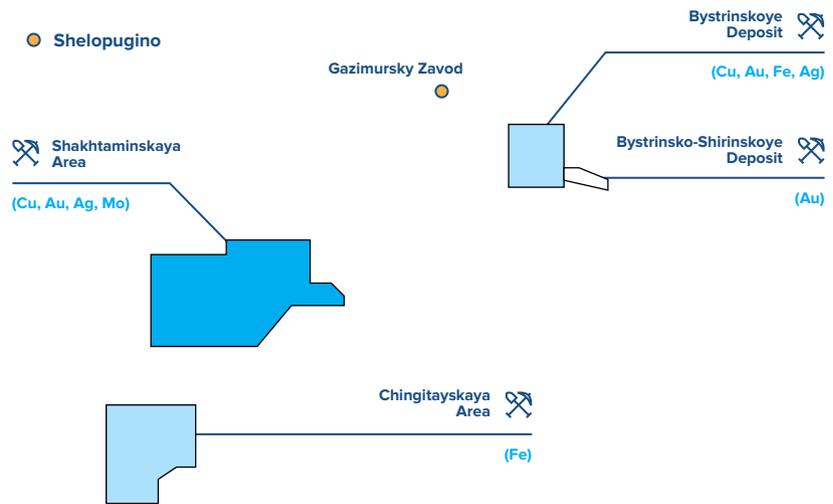
Kola MMC develops deposits located within a 25 km stretch between Nickel and Zapolyarny in the west of the Murmansk Region and grouped into two ore clusters: Western (Kotselvaara and Semiletka deposits) and Eastern (Zhdanovskoye, Zapolyarnoye, Bystrinskoye, Tundrovoye, Sputnik and Verkhneye deposits). The deposits in the Western and Eastern clusters have been developed since the 1930s and 1960s, respectively.

RESERVES AND RESOURCES

Item	Ore	Nickel	Copper
Proven and probable reserves (according to the JORC Code)	79.7 mln t	0.5 mln t	0.2 mln t
Measured and indicated resources (according to the JORC Code)	315.6 mln t	2.2 mln t	1.1 mln t
Balance reserves	457.8 mln t	3.1 mln t	1.5 mln t
Balance metal reserves involved in 2020	6.8 mln t	43.4 kt	20.1 kt

BYSTRINSKOYE DEPOSIT

The Bystrinskoye deposit is located in the Zabaykalsky Region, 16 km east of Gazimursky Zavod. Nornickel owns 50.01% of GRK Bystrinskoye which develops gold-iron-copper ores of the Bystrinskoye deposit. The Bystrinskoye deposit and Bystrinsky GOK came online in 2019.

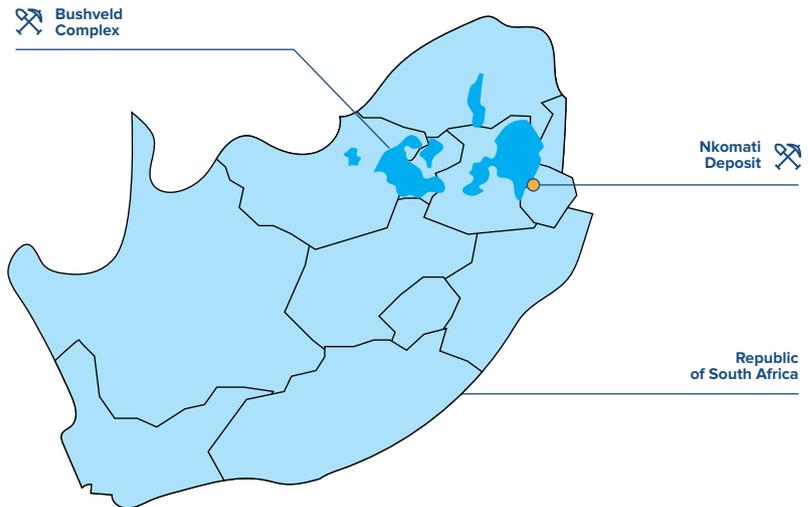


RESERVES AND RESOURCES

Item	Ore	Copper	Gold	Silver	Iron
Balance reserves	300.9 mln t	2.1 mln t	8.1 Moz	36.9 Moz	67.5 mln t
Balance reserves involved in 2020	15.1 mln t	90.8 kt	578 koz	1,444 koz	2.5 mln t

NKOMATI DEPOSIT

The Nkomati disseminated copper-nickel sulphide ore deposit is geologically part of the Bushveld Complex in South Africa. The deposit consists of several ore bodies. The major ones are a solid sulphide ore body (high-grade nickel ore) and the main mineralisation zone (MMZ ore). It also includes a peridotite chromite mineralisation zone (PCMZ) with a lower metal content vs the main mineralisation zone. The deposit is developed by Nkomati (50%-owned by Nornickel).



RESERVES AND RESOURCES

Item	Ore	Nickel	Copper	Cobalt	PGMs
Proven and probable reserves	0.9 mln t	3 kt	1 kt	0.2 kt	0.03 Moz
Measured and indicated resources	168.5 mln t	590 kt	227 kt	29 kt	4.9 Moz

GROWTH PROJECTS

MASLOVSKOYE DEPOSIT

The Maslovskoye deposit is located in the Norilsk Industrial District, 12 km south of Norilsk. Geologically, the deposit is part of the Norilsk Ore Cluster.

The Company received the licence to explore and mine the Maslovskoye deposit's platinum-copper-nickel sulphide ores upon its discovery in 2015.

Reserves

A feasibility study of permanent exploratory standards and a reserve statement for the Maslovskoye deposit were approved by the State Commission for Mineral Reserves of the Russian Ministry of Natural Resources and included into the State Register of Mineral Reserves (Minutes No. 5561 dated 12 October 2018).

B + C1 + C2 MINERAL RESERVES

Item	Reserves	Metal content in ore
Total ore	206,8 mln t	–
Palladium	33 087 koz	5.0 g/t
Platinum	13 040 koz	2.0 g/t
Nickel	711 kt	0.3%
Copper	1 098 kt	0.5%
Cobalt	26 kt	0.01%
Gold	1 268 koz	0.2 g/t

BUGDAINSKOYE DEPOSIT

The Bugdainskoye molybdenum deposit lies in the Alexandrovo-Zavodsky District of the Zabaykalsky Region, 30 km north-west of Alexandrovsky Zavod.

Its mineral reserves were included into the State Register of Mineral Reserves in 2007. In 2014,

Nornickel halted the development of the Bugdainskoye deposit for three years in a low-price environment across the global molybdenum market, and in 2017 extended the suspension of operations for another five years, until 31 December 2022.

B + C1 + C2 MINERAL RESERVES

Item	Reserves
Ore	812 mln t
Molybdenum	600 kt
Gold	360 koz
Silver	6,221 koz
Lead	41 kt

BYSTRINSKO-SHIRINSKOYE DEPOSIT

The Bystrinsko-Shirinskoye gold ore deposit is located 24 km south-east of Gazimursky Zavod in the Zabaykalsky Region.

The licence area shares a boundary with the Bystrinskoye deposit. In 2017–2020, SRK Consulting (Russia) Ltd conducted a scoping study of development options for the Bystrinsko-Shirinskoye gold ore deposit and completed a mineral resource estimate in line with the JORC Code, followed by the evaluation of technical and economic viability of the potential development option. The Company is exploring options for ores from the Bystrinsko-Shirinskoye deposit to be processed along with gold ores from the Bystrinskoye deposit.

TALNAKH ORE CLUSTER DEPOSITS

To unlock the full potential of its deposits supporting existing operations and determine the best configuration for new operations, Nornickel explores the Talnakh ore cluster deposits, ensuring increases in high-grade and cuprous ore reserves.

Eastern flank of the Oktyabrskoye deposit

In 2020, Nornickel conducted surface exploration within its licence boundaries as part of the Follow-Up Exploration of the Oktyabrskoye Deposit project. The project uncovered new high-grade ore zones as well as further defined the boundaries and delivered a detailed geology of the high-grading ore reserves within the Severnaya 3 and Severnaya 4 deposits. A quantitative

estimate of the newly identified resource potential is planned following the project completion in the second half of 2021.

Western flank of the Oktyabrskoye deposit

In 2017, Nornickel obtained an exploration licence to prospect for, and appraise, mineral deposits within the western flank of the Oktyabrskoye deposit. The exploration licence area shares a boundary with the already licensed mining area at the Oktyabrskoye copper-nickel ore deposit. Prospecting on the Severny section continued in 2020. Preliminary estimates of the Zapadny section suggest potential reserve growth of 822 kt in high-grade copper and nickel ores, 2,717 kt in cuprous ores and 688 kt in disseminated ores.

NON-METALLIC MINERAL DEPOSITS IN THE NORILSK REGION

Mokulaevskoye deposit

The Mokulaevskoye limestone deposit lies 10 km north-west of the production sites of the Oktyabrsky and Taimyrsky Mines. The mining licence for this limestone deposit was obtained upon its discovery in 2017. In 2018, the State Commission for Mineral Reserves of the Russian Ministry of Natural Resources reviewed the feasibility study of permanent exploratory standards and the reserve statement for the deposit and included its limestone reserves into the State Register of Mineral Reserves for potential use in cement and lime production and in sulphuric acid neutralisation. The deposit can be developed through open-pit mining.

Its B + C1 + C2 balance reserves of limestone are 135,661 kt.

Ozero Lesnoye deposit

In 2017, Nornickel obtained a survey, exploration and mining licence for the basalt reserves of the Ozero Lesnoye deposit (licence area No. 2), located 22 km north of Norilsk.

Following a review of the 2019 feasibility study of permanent exploratory standards and the reserve statement, the deposit's basalt reserves were included into the State Register of Mineral Reserves for potential use as inert reinforcement for backfill concrete in underground mines.

The C1 + C2 balance reserves of basalt are 187,911 thousand m³.

Gribanovskoye deposit

In 2020, Nornickel obtained an exploration and mining licence upon the discovery of the Gribanovskoye deposit, located on the Yenisey River, 22.5 km south of Dudinka. Exploration phase activities were completed, and a pilot operation was started at the deposit in 2020. In 2021, Nornickel plans to present the feasibility study of permanent standards and the reserve statement to be reviewed by the State Commission for Mineral Reserves to confirm the reserves of silica sand. The Gribanovskoye deposit's reserves are measured based on provisional exploratory standards, and the C1 + C2 reserves are currently estimated at 88,371 kt.

Gorozubovskoye deposit

In 2020, following further examination of the deposit's flanks carried out as part of follow-up exploration of the Gorozubovskoye anhydrite deposit, the reserves were reclassified from C2 to C1. As a result, the deposit's reserves were recalculated. Certificate

No. 6507 issued by the State Commission for Mineral Reserves of the Russian Ministry of Natural Resources on 13 December 2020 confirmed the parameters of updated standards; anhydrite reserves were confirmed as follows: C1 balance reserves at 81,830 kt, C2 balance reserves at 12,484 kt, and A + B + C1 + C2 off-balance reserves at 1,640 kt.

PROMISING AREAS AND PROSPECTS

Khalilskaya area

The Razvedochny, Mogensky, Khalilsky, Nizhne-Khalilsky, and Nirungdinsky copper-nickel sulphide ore prospects lie within the Khalilskaya area, located 150–160 km south-east of Norilsk. In 2014, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted prospecting drilling across all promising areas. A report on the area's potential is to be prepared in 2021 upon the completion of chemical and analytical studies and laboratory tests.

Lebyazhninskaya area

The Lebyazhninskaya copper-nickel sulphide ore prospect is located 20 km north-west of Norilsk. In 2014, Nornickel obtained an exploration licence to prospect for, and appraise, deposits within the area. In 2020, laboratory tests were completed, and a report was prepared based on prospecting results, which included the appraisal of the area's resource potential. P1 disseminated ore resources

within the Lebyazhninskaya area are estimated at 172.25 mln t. An economic evaluation concluded that disseminated ore development would be unviable, and a decision was taken to give up the exploration right and hand back the license.

Yuzhno-Norilskaya area

The Morongovsky and Yuzhno-Yergalakhsky copper-nickel sulphide ore prospects lie within the Yuzhno-Norilskaya area, located 30 km south of Norilsk. In 2019, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted geophysical and geochemical prospecting across areal zones and identified drilling targets to confirm the geology.

Mikchangdinskaya area

The Neralakhsky, Yuzhno-Neralakhsky, Snezhny, Yuzhno-Ikensky and Medvezhy copper-nickel sulphide ore prospects lie within the Mikchangdinskaya area, located 70 km north-east of Norilsk. Between December 2019 and April 2020, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted geophysical and geochemical prospecting across areal zones and identified drilling targets to confirm the geology.

Arylakhskaya area

The Yttakhsky, Samoedsky and Mastakh-Salinsky copper-nickel sulphide ore prospects lie within the Arylakhskaya area, located 160 km north-east

of Norilsk. In May 2020, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted geophysical and geochemical prospecting across areal zones and identified drilling targets to confirm the geology.

Alenuyskaya area

The Severo-Alenuysky and Yuzhno-Alenuysky gold-copper porphyry and epithermal gold-quartz mineralisation prospects lie within the Alenuyskaya area, located in the Aleksandrovo-Zavodsky Municipal District of the Zabaykalsky Region. In February and March 2020, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted geophysical and geochemical prospecting across areal zones, to be continued in 2021 to further identify drilling targets to confirm the geology.

Mostovskaya area

The Zapadno-Mostovsky and Vostochno-Mostovsky gold-copper porphyry and epithermal gold-quartz mineralisation prospects lie within the Mostovskaya area, located in the Mogochinsky District of the Zabaykalsky Region. In May 2020, Nornickel obtained exploration licences to prospect for, and appraise, deposits within the area. In 2020, the Company conducted geophysical and geochemical prospecting across areal zones, to be continued in 2021 to further identify drilling targets to confirm the geology.

OPERATIONAL PERFORMANCE

OPERATING PERFORMANCE FOR THE PAST 10 YEARS

Norilsk nickel group saleable metals production ¹	2011	2012	2013
Total nickel, t	295,098	300,340	285,292
including from own Russian feed	234,906	223,153	219,273
including from 3d parties feed	60,192	77,187	66,019
Total copper, t	377,944	363,764	371,063
including from own Russian feed	362,854	344,226	345,737
including from 3d parties feed	15,090	19,538	25,326
Total palladium, koz	2,806	2,732	2,662
including from own Russian feed	2,704	2,624	2,529
including from 3d parties feed	102	108	133
Total palladium, koz	696	683	650
including from own Russian feed	672	658	604
including from 3d parties feed	24	25	46
Norilsk and Kola Division (Russia)			
Nickel, t	237,227	233,632	231,798
Norilsk Division	124,000	124,000	122,700
Kola Division	113,227	109,632	109,098
including from own Russian feed	110,906	99,153	96,573
Copper, t	363,460	352,466	359,102
Norilsk Division	303,940	295,610	296,760
Kola Division	59,520	56,856	62,342
including from own Russian feed	58,914	48,616	48,977
Palladium, koz	2,704	2,628	2,580
Norilsk Division	2,038	1,989	2,006
Kola Division	666	639	574
including from own Russian feed	666	635	523
Platinum, koz	672	660	627
Norilsk Division	536	529	504
Kola Division	136	131	123
including from own Russian feed	136	129	100

¹ Total amounts may vary from the sum of numbers due to arithmetical rounding. The production results of Nkomati are not included in the total amounts of the Group.

² Norilsk Nickel owns 50.01% of Bystrinsky GOK. Production results are shown metal in concentrate for sale on 100% basis and the total operating results fully include Bystrinsky GOK. Bystrinsky GOK was commissioned in 2019.

	2014	2015	2016	2017	2018	2019	2020
	274,248	266,406	235,749	217,112	218,770	228,687	235,709
	223,224	220,675	196,809	210,131	216,856	225,204	232,532
	51,024	45,731	38,940	6,981	1,914	3,482	3,177
	368,008	369,426	360,217	401,081	473,654	499,119	487,186
	345,897	352,766	344,482	397,774	473,515	498,838	486,816
	22,111	16,660	15,735	3,307	139	281	370
	2,752	2,689	2,618	2,780	2,729	2,922	2,826
	2,582	2,575	2,526	2,728	2,729	2,919	2,820
	170	114	92	52	0	3	6
	662	656	644	670	653	702	695
	595	610	610	650	653	700	693
	67	46	34	20	0	2	2
	228,438	222,016	182,095	157,396	158,005	166,265	172,357
	122,390	96,916	50,860	0	0	0	0
	106,048	125,100	131,235	157,396	158,005	166,265	172,357
	100,834	123,335	126,937	155,110	157,519	166,265	172,357
	354,943	355,707	350,619	387,640	436,201	442,682	422,031
	297,552	292,632	280,347	306,859	353,131	355,706	351,413
	57,391	63,075	70,272	80,781	83,070	86,976	70,618
	48,345	60,134	63,542	78,587	82,987	86,976	70,618
	2,660	2,606	2,554	2,738	2,671	2,868	2,809
	2,065	1,935	1,703	956	987	1,042	1,180
	595	671	851	1,782	1,684	1,826	1,630
	517	640	815	1,737	1,684	1,826	1,630
	627	622	622	660	642	690	691
	500	488	449	259	260	251	302
	127	134	173	401	381	439	390
	95	122	159	385	381	439	390

Norilsk nickel group saleable metals production» ¹	2011	2012	2013
Zabaykalsky Division (Russia)²			
Copper (in concentrate), t	–	–	–
Gold (in concentrate), koz	–	–	–
Iron ore concentrate, t	–	–	–
Kola Division (Finland)			
Nickel, t	48,525	45,518	44,252
including from own Russian feed	–	–	–
Copper, t	5,681	1,006	6,549
including from own Russian feed	–	–	–
Palladium, koz	34	21	39
including from own Russian feed	–	–	–
Platinum, koz	12	9	16
including from own Russian feed	–	–	–
Nkomati (South Africa)³			
Nickel, t	5,815	9,624	11,920
Copper, t	2,927	4,594	5,034
Palladium, koz	24	32	46
Platinum, koz	9	12	20
Norilsk Nickel Tati (Botswana)⁴			
Nickel, t	9,346	12,215	6,416
Copper, t	8,803	10,292	5,412
Palladium, koz	68	83	43
Platinum, koz	12	14	7
Lake Johnston (Australia)			
Nickel, t	–	8,975	2,826

¹ Total amounts may vary from the sum of numbers due to arithmetical rounding. The production results of Nkomati are not included in the total amounts of the Group.

² Norilsk Nickel Group owns 50.01% of Bystrinsky GOK. Production results are shown metal in concentrate for sale on 100% basis and the total operating results fully include Bystrinsky GOK. Bystrinsky GOK was commissioned in 2019.

³ Norilsk Nickel Group owns 50% of Nkomati. Production results report metal contained in saleable concentrate on a 50% basis and are not consolidated in the Group's total operating results. In 2019, the Group and its operating partner, African Rainbow Minerals, reached an agreement to scale down production at Nkomati Nickel Mine. The operations of the mine are planned to cease in 1H2021 whereafter the mine is to be placed on limited care and maintenance pending the finalisation and submission of a closure plan.

⁴ The sale of the asset was closed on 2 April 2015.

	2014	2015	2016	2017	2018	2019	2020
	-	-	-	-	19,417	43,489	62,664
	-	-	-	-	89	177	241
	-	-	-	-	346	1,311	2,046
	42,603	43,479	53,654	59,716	60,765	62,422	63,352
	-	424	19,012	55,021	59,337	58,939	60,175
	10,629	13,048	9,598	13,441	18,036	12,948	2,491
	-	-	593	12,328	17,980	12,667	2,121
	74	78	64	42	58	54	17
	-	-	8	35	58	51	11
	31	33	22	10	11	12	4
	-	-	2	6	11	9	2
	11,359	11,350	8,486	8,006	6,597	6,485	5,839
	4,938	5,301	4,007	4,504	3,055	3,419	2,877
	48	53	40	46	33	33	30
	19	20	15	20	13	14	13
	3,207	911	-	-	-	-	-
	2,436	671	-	-	-	-	-
	18	5	-	-	-	-	-
	4	1	-	-	-	-	-
	-	-	-	-	-	-	-

Despite a number of serious environmental and COVID-related challenges facing the Company in 2020, we have fully achieved our production targets. With optimised operating processes and new refining site at Kola MMC now running at design capacity, we delivered on our nickel production guidance and exceeded production targets for platinum group metals. We also met our copper production guidance

thanks to the scheduled ramp-up at Bystrinsky GOK. In the last quarter of 2020, Bystrinsky GOK reached design capacity for all metals.

The Company has implemented maximum measures to protect its people as part of its COVID-19 response. The COVID-19 situation is under management's control and does not impact significantly on our operating processes.

GROUP ORE OUTPUT (MLN T)

Asset	2018	2019	2020
Assets in Russia (copper-nickel sulphide ore)	25.2	26.3	26.5
Norilsk Division	17.3	18.4	18.8
Kola Division	7.9	7.9	7.7
Assets in Russia (gold-iron-copper ores)	7.9	10.5	16.0
Zabaykalsky Division	7.9	10.5	16.0
Nkomati (South Africa)¹	3.1	3.5	2.7

AVERAGE METAL CONTENT IN MINED ORE

Asset	2018	2019	2020
Nickel, %			
Norilsk Division	1.3	1.3	1.3
Kola Division	0.6	0.5	0.5
Nkomati	0.3	0.3	0.3
Copper, %			
Norilsk Division	2.2	2.2	2.3
Kola Division	0.2	0.2	0.2
Zabaykalsky Division	0.4	0.6	0.6
Nkomati	0.1	0.1	0.1
PGMs, g/t			
Norilsk Division	6.8	6.9	6.9
Kola Division	0.1	0.1	0.1
Nkomati	N/a	N/a	N/a

¹ All metrics for Nkomati are hereinafter shown based on the 50% ownership. Nkomati's operating results are not consolidated into the Group's total results.

² The PGMs are palladium, platinum, rhodium, ruthenium and iridium.

METALS RECOVERY IN CONCENTRATION (%)

Asset	2018	2019	2020
Nickel			
Norilsk Division	81.5	83.1 ³	84.81
Kola Division	69.5	67.9	62.9
Nkomati	65.9	64.2	68.3
Copper			
Norilsk Division	94.6	95.2 ³	95.1 ³
Kola Division	74.1	73.2	71.8
Zabaykalsky Division	82.9	87.7	87.4
Nkomati	88.4	87.7	85.4
PGMs			
Norilsk Division	82.7	85.2 ³	86.4 ³

METALS RECOVERY IN SMELTING (%)

Asset	2018	2019	2020
Nickel			
Norilsk Division ⁴	94.6	94.6	94.1
Kola Division (Kola MMC) ⁵	96.7	96.7	96.8
Kola Division (Kola MMC) ⁵	98.0	97.0	96.3
Kola Division (NN Harjavalta) ⁶	97.9	97.9	98.2
Copper			
Norilsk Division ⁴	94.4	94.1	94.6
Kola Division (Kola MMC) ⁵	96.1	96.2	96.5
Kola Division (Kola MMC) ⁵	97.6	96.5	95.4
Kola Division (NN Harjavalta) ⁶	99.7	99.8	99.8
PGMs			
Norilsk Division ⁴	95.9	95.8	96.4
Kola Division (Kola MMC) ⁵	94.0	91.6	92.9
Kola Division (NN Harjavalta) ⁶	99.8	99.8	99.9

³ Metals recovery in bulk concentrate.⁴ Feedstock to finished products.⁵ Feedstock to converter matte.⁶ In refining, converter matte to finished products.

SALEABLE METALS PRODUCTION

Product	2018	2019	2020
Group total			
Nickel, kt	218.8	228.7	235.7
from own feed	216.9	225.2	232.5
Copper, kt	473.7	499.1	487.2
from own feed	473.5	498.8	486.8
Palladium, koz	2,729	2,922	2,826
from own feed	2,729	2,919	2,820
Platinum, koz	653	702	695
from own feed	653	700	693
Norilsk and Kola Divisions			
Nickel, kt	158.0	166.3	172.4
Copper, kt	455.6	486.2	484.7
Palladium, koz	2,671	2,868	2,809
Platinum, koz	642	690	691
Kola Division – NN Harjavalta			
Nickel, kt	60.8	62.4	63.4
Copper, kt	18.0	12.9	2.5
Palladium, koz	58	54	17
Platinum, koz	11	12	4
Nkomati (South Africa)¹			
Nickel, kt	6.6	6.5	5.8
Copper, kt	3.1	3.4	2.9
Palladium, koz	33	33	30
Platinum, koz	13	14	13

NORILSK DIVISION (RUSSIA)

The Norilsk Division is the Group's flagship assets boasting a full metals production cycle from ore mining to the shipment of finished products to customers. They are located on the Taimyr Peninsula in Russia, in the north of the Krasnoyarsk Region beyond the Arctic Circle, and linked to other regions by the Yenisey River, the Northern Sea Route, and by air.

Operating the largest deposits in the Company's portfolio, the Norilsk Division mines over 18 Mtpa of copper-nickel sulphide ore.

In 2020, the Norilsk Division accounted for

72% copper
42% PGMs
 of the Group's total

¹ Nkomati's operating results are not consolidated into the Group's total results.

MINING

The Norilsk Division mine copper-nickel sulphide ores of three grades: rich ores, characterised by a higher content of base and precious metals; cuprous ores, with a higher copper content vs nickel; and disseminated ores, with a lower content of all metals.

The Talnakhskoye and Oktyabrskoye deposits are developed by Taimyrsky, Oktyabrsky, Komsomolsky, Skalisty and Mayak Mines. The mines deploy slicing and chamber methods with

the cut-and-fill system. Stopes are refilled with backfill mixtures, with their composition adjusted in each case depending on technological requirements for mine backfill durability.

The Norilsk-1 deposit is developed by Zapolyarny Mine (Medvezhy Ruchey – South Cluster project), through open-pit and underground mining. Underground mining is carried out through sublevel (level) caving using front ore passes and self-propelled vehicles.

Ore production from the Norilsk Division was 18.8 mln t in 2020, up 0.4 mln t y-o-y (+2%). Rich and disseminated ore production increased by 2% and 10%, respectively, with Taimyrsky and Skalisty Mines also increasing their combined rich ore production by 12% y-o-y. Disseminated ore production grew at Komsomolsky Mine (+42%) and Zapolyarny Mine (+4%). Total production of cuprous ore decreased by 5% y-o-y. The change in the mined ore output was in line with the annual production plan.

ORE OUTPUT (MLN T)

Mining asset, ore type	Mine type	2018	2019	2020
Total ore		17.32	18.42	18.82
rich		6.78	7.35	7.48
cuprous		5.24	5.75	5.49
disseminated		5.30	5.32	5.85
ZAPOLYARNY				
Oktyabrskoye deposit:		8.95	9.45	9.58
Oktyabrsky Mine	Underground	5.17	5.37	5.34
rich		0.98	0.88	0.80
cuprous		2.98	3.38	3.41
disseminated		1.21	1.11	1.13
Taymirsky Mine	Underground	3.79	4.08	4.24
rich		3.79	4.08	4.24
Talnakhskoye and Oktyabrskoye deposits:		6.70	7.34	7.55
Komsomolsky Mine	Underground	3.82	4.00	4.25
rich		0.11	0.10	0.14
cuprous		2.18	2.28	1.81
disseminated		1.53	1.62	2.3
Skalisty Mine	Underground	1.95	2.34	2.54
rich		1.87	2.25	2.27
cuprous		0.09	0.09	0.27
Mayak Mine	Underground	0.93	1.00	0.76
rich		0.04	0.04	0.03
disseminated		0.89	0.97	0.73
MEDVEZHY RUCHEY				
Norilsk-1 deposit				
Zapolyarny Mine	Open-pit/underground			
disseminated		1.67	1.63	1.69

CONCENTRATION

Talnakh Concentrator processes rich, cuprous and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits to produce nickel-pyrrhotite and copper concentrates, and metal-bearing products. The key processing stages include crushing, milling, flotation and thickening.

Norilsk Concentrator processes all disseminated ores from the Norilsk-1 deposit, cuprous and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits, and low-grade ores from Copper Plant to produce nickel and copper concentrates. The key processing stages include crushing, milling, flotation, gravity concentration and thickening.

Thickened concentrates are transported from Talnakh and Norilsk Concentrators via slurry pipelines for further processing. In 2020, the Company's concentration facilities processed a total of 18.5 mln t across all types of ore feedstocks (including rich, cuprous and disseminated ores).

Talnakh Concentrator processed 10.9 mln t of ore in 2020 (up 0.2 mln t y-o-y). Its nickel recovery from ore into bulk flotation concentrate, including the output of metal-bearing pyrrhotite products, increased by 2.0% y-o-y to 87.9% due to the optimised technology for obtaining copper-nickel concentrate deployed at Talnakh Concentrator.

Talnakh Concentrator increased ore processing to 7.6 mln t (up 0.1 mln t y-o-y) in 2020. The facility's nickel recovery into bulk concentrate was 0.7% lower y-o-y at 70.6%. During the year, the facility also processed significant amounts of low-grade ores from Copper Plant.

CONCENTRATION FACILITIES

- Talnakh Concentrator
- Norilsk Concentrator

ORE PROCESSING AND NICKEL RECOVERY

Concentrator	2018	2019	2020
Sulphide ores processed (mln t)			
Talnakh Concentrator	10.4	10.7	10.9
Norilsk Concentrator	6.8	7.5	7.6
Nickel recovery (%)			
Talnakh Concentrator	83.2	85.9	87.9
Norilsk Concentrator	71.9	71.3	70.6

SMELTING

Production chain

The produced concentrates, including steam cured sulphide concentrate, and secondary materials are fed into flash smelting furnaces at Nadezhda Metallurgical Plant. Steam cured sulphide concentrate is leached at Hydrometallurgical Shop of Nadezhda Metallurgical Plant from products with low metal content, such as Talnakh Concentrator's metal-bearing products,

products from Nadezhda Metallurgical Plant's tailings facility, and concentrates from tailings ponds. The matte produced in flash smelting furnaces is then converted into high-grade converter matte.

Copper Plant processes all of the copper concentrate from the Company's concentrators, as well as third-party feedstocks, to obtain copper cathodes, elemental sulphur and sulphuric acid for the operational needs of the Polar Division.

SMELTING ASSETS

- Nadezhda Metallurgical Plant
- Copper Plant
- Copper Plant's smelting shop

Copper Plant's smelting shop recycles sludge from the copper tankhouses of Copper Plant and Kola MMC to produce precious metal concentrates, commercial selenium and tellurium.

The precious metals produced by the Norilsk Division are refined at Krastsvetmet, URALINTECH, and Prioksky Plant of Non-Ferrous Metals under tolling agreements.

Copper production remained basically flat y-o-y in 2020, with a slight decrease of 1% due to a lower-than-expected copper content in the stored copper concentrate provided by Rostec and concentrate stock drawdowns by Rostec. PGM output increased by 15% y-o-y, mainly due to temporary processing of chlorine dissolution residue by Copper Plant (during the deployment of a new precious metal production technology at Kola

MMC) and higher precious metal content in the copper cake supplied by Norilsk Nickel Harjavalta.

The Polar Division products:

- Copper cathodes
- Nickel converter matte sent for processing to Kola MMC
- Precious metal concentrates
- Commercial sulphur, selenium
- Tellurium in billots

PRODUCTION VOLUMES

Product	2018	2019	2020
Copper, t	353,131	355,706	351,413
Palladium, koz	987	1,042	1,180
Platinum, koz	260	251	302

KOLA DIVISION (RUSSIA)

Kola MMC is Nor Nickel's wholly owned subsidiary and a valuable production asset located in the Kola Peninsula in the Murmansk Region of Russia.

In 2020, Kola MMC accounted for 73%, 14% and 57% of the Group's total nickel, copper, and PGM finished products, respectively.

MINING

Kola MMC mines disseminated copper-nickel sulphide ores.

At Kola MMC, various ore mining methods are used:

- The Zhdanovskoye and Zapolyarnoye deposits use three mining methods: gravity caving with front ore passes, sublevel caving with room-and-pillar ore removal, and room-and-pillar mining. To ensure full utilisation of the concentrator's design capacity, off-balance (sub-economic) open-pit mining waste is processed as well

- The Kotselvaara and Semiletka deposits primarily use stoping from sublevel drifts and sublevel caving. Room-and-pillar short-hole and long-hole stoping are also used on a limited scale

In 2020, Kola MMC produced about 7.7 mln t of ore (down 3% y-o-y), with the marginal decrease attributable to dwindling surplus ore inventories that had built up at the end of 2019 due to scheduled maintenance at the concentrator.

ORE OUTPUT (MLN T)

Mining asset	Mine type	2018	2019	2020
Total ore		7.90	7.91	7.65
Zhdanovskoye deposit:		7.14	7.25	7.08
Severnny Mine	Underground	6.56	6.49	6.43
Severnny Mine	Open-pit	0.58	0.77	0.65
Zapolyarnoye deposit:		0.08	0.06	0.05
Severnny underground section	Underground	0.08	0.06	0.05
Kotselvaara and Semiletka deposits:		0.68	0.60	0.52
Kaula-Kotselvaara mine	Underground	0.68	0.60	0.52

CONCENTRATION

The concentrator produces briquetted copper-nickel concentrate. Briquettes are delivered to a smelting shop in Nikel to produce converter matte.

In 2020, Kola MMC's concentrator processed 7.96 mln t of ore (up 5%).

The rate of metals recovery in bulk concentrate decreased, due to a higher share of complex morphology ores with disseminated sulphide minerals in the charge.

CONCENTRATION FACILITIES

- Zapolyarny Concentrator

ORE PROCESSING

Concentrator	2018	2019	2020
Ore processing by the concentrator, mln t	7.90	7.60	7.96

SMELTING

Nornickel has continued to ramp up Tankhouse 2 to design capacity for the production of nickel cathode using the technology of electrowinning from chlorine dissolved tube furnace nickel powder.

In 2020, Kola MMC used only Nornickel's own Russian feedstock in metals production. Growth in saleable nickel output was mostly driven by the start-up of saleable nickel loading point at the concentrator. Saleable copper output decreased due to changes in the output mix of saleable products and the redistribution of copper semi-products within the Company. Lower PGM output in 2020 was caused by temporary shipments of chlorine leaching residuals to the Polar Division (during the deployment of a new precious metal production technology at Kola

MMC) and larger amount of transportation and production work-in-progress along the Kola MMC – Norilsk Nickel Harjavalta – the Polar Division leg due to shipments of converter matte with a higher PGM content to Norilsk Nickel Harjavalta.

Products:

- Nickel cathodes
- Nickel carbonyl
- Saleable nickel concentrate
- Copper cathodes
- Saleable copper concentrate from converter matte separation
- Sulphide concentrate from the concentrator
- Cobalt cathodes
- Cobalt concentrate
- Precious metal concentrates
- Sulphuric acid
- Crushed converter matte for Harjavalta

DOWNSTREAM FACILITIES

- Smelting shop (Nikel), shut down in December 2020
- Briquetting section (Zapolyarny), shut down in December 2020
- Smelting shop (Monchegorsk), shut down in March 2021
- Chemical-and-metallurgical shop (Monchegorsk)
- Refining shop (Monchegorsk)
- Tankhouses 1 and 2 (Monchegorsk)

PRODUCTION VOLUMES

Product	2018	2019	2020
Nickel, t	158,005	166,265	172,357
from own Russian feed	157,519	166,265	172,357
Copper, t	83,070	86,976	70,618
from own Russian feed	82,987	86,976	70,618
Palladium, koz	1,684	1,826	1,630
from own Russian feed	1,684	1,826	1,630
Platinum, koz	381	439	390
from own Russian feed	381	439	390

KOLA DIVISION (FINLAND)

Norilsk Nickel Harjavalta is Nornickel's wholly owned subsidiary, acquired by the Group in 2007. The Harjavalta facility processes Nornickel's Russian feedstock and nickel-bearing raw materials sourced from third-party suppliers.

Founded in 1959, it is Finland's only nickel refinery and one of the largest nickel producers in Europe. Harjavalta's capacity is 66 ktpa of nickel products.

The facility uses sulphuric acid leaching with metal recovery rates above 98%, which is a best practice in the global mining and metals industry.

In 2020, Norilsk Nickel Harjavalta accounted for 27%, 1% and 1% of the Group's total nickel, copper and PGM finished products, respectively.

SMELTING

In 2020, the refining facilities of Kola MMC were gradually increasing their nickel feedstock supplies to Norilsk Nickel Harjavalta in line with the Group's downstream reconfiguration strategy. Third-party feedstocks, i.e., converter matte from Boliden and nickel salts from other suppliers, were supplied regularly in small amounts throughout 2020. Metal recovery improved y-o-y on better quality of copper cake.

In 2020, Norilsk Nickel Harjavalta produced 63.4 kt of saleable nickel (up 1.5% y-o-y), an all-time high for the refinery. The growth was driven by the reconfiguration of refining facilities and increased nickel feedstock supplies from Kola MMC.

The production of copper in copper cake totalled 2.5 kt, down 83% y-o-y, while the output of saleable palladium in copper cake decreased by 69% y-o-y and platinum output was down by 67% y-o-y.

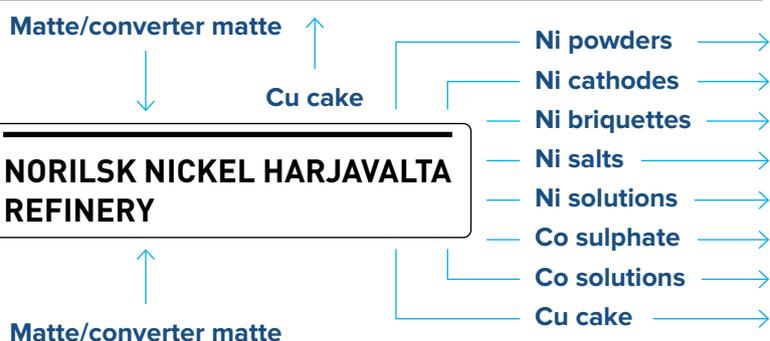
The decrease in copper and palladium output was due to the fact that the copper cake mined was mostly shipped to the Polar Division for further processing.

Products:

- Nickel cathodes and briquettes
- Nickel salts, powders and solutions
- Cobalt sulphate and solutions
- PGM-bearing copper cake

FACILITY'S PROCESS CHART

RUSSIAN NICKEL-BEARING FEEDSTOCK FROM KOLA MMC



PRODUCTION VOLUMES

Product	2018	2019	2020
Nickel, t	60,765	62,422	63,352
from own Russian feed	59,337	58,939	60,175
Copper (in copper cake), t	18,036	12,948	2,491
from own Russian feed	17,980	12,667	2,121
Palladium (in copper cake), koz	58	54	17
from own Russian feed	58	51	11
Platinum (in copper cake), koz	11	12	4
from own Russian feed	11	9	2

ZABAYKALSKY DIVISION

Nornickel commenced the construction of Bystrinsky GOK in 2013. In October 2017, Nornickel started the pre-commissioning activities. Bystrinsky GOK was commissioned in 2019 and reached its design capacity in 2020.

In 2020, Zabaykalsky Division accounted for 13% of the Group's total copper.

MINING

Bystrinsky GOK mines gold-iron-copper ores of the Bystrinskoye deposit.

ORE OUTPUT (MLN T)

Mining asset	Mine type	2018	2019	2020
Total ore		7.86	10.49	16.04
Bystrinskoye deposit		7.86	10.49	16.04
Verkhneildikansky open-pit mine	Open-pit	7.43	8.60	11.57
Bystrinsky-2 open-pit mine	Open-pit	0.43	1.89	4.47

CONCENTRATION

The concentrator construction commenced in 2015; the facility's purpose is to process ores of the Bystrinskoye deposit into copper, iron ore and gold concentrates. The key processing stages include crushing, milling, flotation, thickening, filtration and end product packaging. The concentrator has two processing lines. In 2020, it processed 9.76 mln t of ore (2019: 7.5 mln t). The increase was due to scheduled ramp-up to design capacity.

Copper and iron ore concentrates are sold via third parties, while gold concentrates are further processed at the Polar Division.

Products:

- Copper concentrate
- Gold concentrate
- Iron ore concentrate

CONCENTRATION FACILITIES

- Concentrator

PRODUCTION VOLUMES

Product	2018	2019	2020
Ore processing, mln t	3.8	7.5	9.8
Copper (in copper concentrate), t	19,417	43,489	62,663
copper content in the concentrate, %	25.4	25.5	24.7
Gold (in copper and gold concentrates), koz	89	177	241
gold content in the concentrate, g/t	6,218	4,034	3,050
Iron ore concentrate, kt	346	1,311	2,047
iron content in the concentrate, %	64.1	64.6	64.2

NKOMATI (SOUTH AFRICA)

Nkomati is a joint venture between Nor Nickel (50% interest) and African Rainbow Minerals. Nkomati's performance is reflected in Nor Nickel's financial results using proportional consolidation, based on our stake. The operations of the mine are planned to cease in 1H2021 whereafter the mine is to be placed on limited care and maintenance pending the finalisation and submission of a closure plan.

Nkomati is located in the Mpumalanga Province, South Africa, 300 km east of Johannesburg. It is South Africa's only producer of nickel concentrate, which also contains copper, cobalt and PGMs. Nkomati produces chrome concentrate as well.

MINING

The Nkomati deposit has a substantial resource base represented by disseminated copper-nickel sulphide ores. The deposit consists of several

ore bodies. The major ones are a solid sulphide ore body with a high nickel content and a peridotite chromite mineralisation zone with a relatively lower nickel content and a relatively higher chrome content.

In 2020, total ore mined by Nkomati reached 2.7 mln t (attributable to the Group's 50% shareholding) with an average nickel content of 0.27% and copper content of 0.11%.

CONCENTRATION AND SMELTING

The mined ore is processed at the concentrators using the sulphide flotation technology, with the resulting concentrates then sold by Nor Nickel to third parties.

In 2020, Nkomati (50% owned by the Group) produced 6 kt of nickel, 3 kt of copper, 30 koz of palladium and 13 koz of platinum. The metals

output decline in the reporting period was due to the planned placement of the mine in care and maintenance and the completion of reserve mining.

Products:

- Saleable concentrates

CONCENTRATION FACILITIES

- Concentrator for ore mined in the main section, with installed capacity of 375 kt of ore per month
- Concentrator for ore mined in the peridotite chromite section, with installed capacity of 250 kt of ore per month

PRODUCTION VOLUMES¹

Copper (in concentrate), t	2018	2019	2020
Nickel, kt	6.6	6.5	5.8
Copper, kt	3.1	3.4	2.9
Palladium, koz	33	33	30
Platinum, koz	13	14	13

NKOMATI (SOUTH AFRICA) as of 31 December 2020 ²	Ore kt	Metal grade				Contained metal			
		Ni %	Cu %	Co %	4 PGM g/t	Ni kt	Cu kt	Co kt	4 elements koz
Proven and probable reserves	980	0.29	0.11	0.02	0.90	3	1	0.2	27
Measured and indicated resources	168,490	0.35	0.14	0.02	0.94	590	227	29	4,926
Inferred resources	46,350	0.41	0.13	0.02	1.00	188	62	8	1,438

¹ Volumes based on the 50% ownership.

² The Company owns 50% of Nkomati. Nkomati's mineral reserves and resources are not included Group's total amounts.

SALES

Despite the constraints caused by the COVID-19 pandemic, in 2020 Nornickel successfully maintained its long-standing reputation as a reliable supplier of high-quality products. The integrated index of customer satisfaction with the Company's products and services fully matched the target level.

Overall, the pandemic had a significant impact on consumption in the Company's markets in 2020, which declined as a result of the global effort to curb the spread of COVID-19. Demand for some products declined by as much as 20%. Faced with uncertainty, consumers sought to reduce their stock and increase the share of call options/spot trades in procurement. However, the overall decline in demand did not lead to a proportional decrease in the Company's sales. The Company's strong sales performance in 2020 despite external headwinds can be seen as a testament to the effectiveness of the sales strategy chosen by the Company to position itself in its sales markets through developing Nornickel's own sales platform that relies on direct long-term relationships with key consumers and diversified client base.

As a top global producer of base and platinum group metals, Nornickel sees its role as leading the industry on building an improved ecosystem for all market players. The Company continues to advance its innovative

project that embeds its business into a digital ecosystem for higher performance and transparency throughout the metals supply chain, including enabling responsible sourcing for customers. The Company plans to digitise some of its metal supply contracts via Atomyze, an advanced DLT (Distributed Ledger Technology) platform. In 2020, Nornickel's Global Palladium Fund issued its first tokens to digitise the Company's contracts with several of its major customers. Digital investment instruments will also be issued as part of the project, representing a new class of investment products that open up access to commodity markets to a wide range of investors.

Nornickel's products are listed on the London Metal Exchange and the Shanghai Futures Exchange. Registration at the world's top exchanges ensures the necessary liquidity for the Company's products. In early 2020, NORNICKEL full-plate nickel cathodes produced by Kola MMC were registered at the Shanghai Futures Exchange, the leading metals trading platform in China and Asia. Another highlight of the year was the rebranding of NORNICKEL (formerly NORILSK I) cobalt cathodes on the London Metal Exchange.

The Company's products are supplied to 37 countries around the world, with Europe as the major consumer.



«The tokens issued via Atomyze will enable the Global Palladium Fund to market Nornickel's products in an effective and transparent way to a wide range of customers interested in using digital solutions. We are confident that this will give the mining industry the ability to guarantee responsible sourcing».

Anton Berlin,

Nornickel's Vice President, Sales and Distribution

SALES BY REGION (%)



SALES STRATEGY

Sales, along with production, have traditionally been a key focus area of Nornickel's business.

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

Electric vehicles and batteries are a priority segment in the **nickel consumption structure**, as its growth rates suggest that in a longer range it can become the key source of demand for high-grade nickel. Therefore, the Company is running a programme to support high-growth nickel applications, primarily in the battery sector. Cooperation with the growing battery sector relies on our wide range of nickel products, high reliability of supplies, availability of the Company's own global sales platform and a long track-record of partnering with automotive manufacturers and chemical companies. The Company also maintains an ongoing, proactive dialogue with new leading players

in this area. All these factors make Nornickel well-positioned to become a key element in the battery components value chain. In the battery segment, the Company is set to support the electric-vehicle (EV) market and related value chains while maintaining a strong focus on building long-term partnerships with key industry players.

Nornickel's sales team is closely monitoring changes in the technical requirements for nickel and cobalt products in the sector. The Company is actively engaging major players in the battery segment, as evidenced by its agreement with BASF, signed in 2018. Under the agreement, pilot production facilities were launched, commencing supplies of precursors for certification by automakers in 2019. The Company also confirms its plans to arrange for battery recycling.

In the alloys and special steels sector, the Company seeks to maximise the benefits of its product portfolio and improve product quality to boost its share in high-quality, premium segments.

In the electroplating sector, Nornickel is optimising its product offering to better meet customer needs and acquire new customers in other markets.

Accordingly, in order to secure a stable position in the nickel market, the Company seeks to achieve a balanced presence across all segments of the market.

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

One of Nornickel's priorities is to ensure stable supply of palladium as the world palladium market remains significantly undersupplied. As the leading supplier of this metal, the Company's strategy includes a number of measures to maintain the long-term stability of the palladium market and the launch of the new South Cluster project.

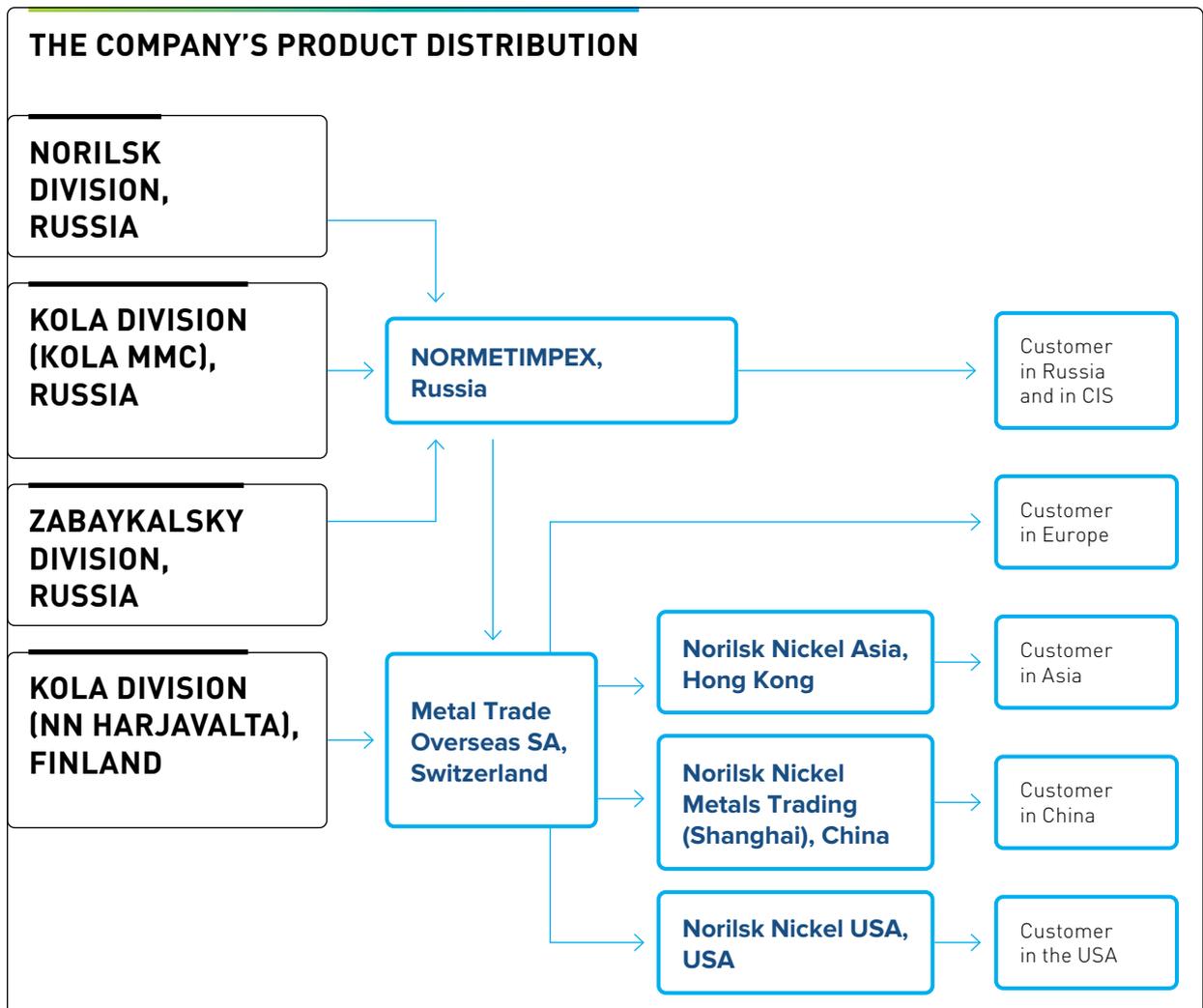
PRODUCT RANGE

One of Nornickel's objectives is to make sure its product range matches the current and anticipated global metals demand.

Nickel product diversification is a priority in developing the product mix as the Company is implementing a range of initiatives to enhance and expand its existing product range, with a particular focus on changes in the metals demand structure, including the rapid growth in the share of electric vehicles and batteries. In particular, Nornickel continues active interactions with the battery sector players to expand its product range to meet the new requirements for shape and quality emerging in the market.

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

In particular, Nornickel is developing new product solutions for critical consumer segments. Over the past two years, the Company developed specialised products for the battery sector based on nickel sulphate solution at its Finnish refining plant. In addition, Nornickel cooperated with a partner to design a competitive process for dissolving nickel and cobalt cathodes as a technological solution for customers to ensure the availability of nickel feed for the production of electric vehicles.





SALEABLE PRODUCTS

Type of metals	Saleable products	Sales markets
Base metals	copper cathodes, copper saleable intermediate products, copper cake	Russia, Europe, Asia, Americas
	nickel cathodes, nickel carbonyl (powder and pellets), nickel briquettes, nickel saleable intermediate products, nickel sulphate (crystals), nickel sulphate solution, nickel hydroxycarbonate	
Presuauus metals	Platinum, palladium, phodium, iridium, ruthenium, gold, gold gravity concentrate, silver	
Others	Cobalt cathodes and sulphates	
	Tellurium ingots	Europe
	Commercial selenium (powder)	Russia, Europe,
	Commercial sulphur	Russia, Asia
	Sodium sulphate	Russia
	Sulphuric acid	Russia
	Iron ore concentrate	Asia, Russia

PROCUREMENT AND SUPPLY CHAIN

PROCUREMENT PROCESS

Nornickel's procurement process is certified to ISO 9001:2015 Quality Management Systems ("ISO 9001:2015") and ISO 14001:2016 Environmental Management Systems ("ISO 14001:2016"). Factors underlying the procurement framework include streamlining supply chains and supplier mix (by increasing the share of manufacturers, their marketing arms, and major traders in total procurement) as well as on-time delivery and price control.

Procurement activities can be either centralised or organised independently by the Head Office units, Nornickel branches or Group companies. Depending on the purchase budget, procurement can be organised either as a bidding procedure, simple procurement or simplified procurement. Procurement procedures may involve collective procurement bodies, such as the tender committee, tender commissions of the Head Office, procurement and tender commissions of branches and Group companies. Over 4,000 agreements were signed in 2020 for the supply of inventories under centralised procurement procedures, worth about RUB 89.4 billion (USD 1,239 million) in total. Nornickel has in place category procurement policies.

In 2020, about 58% of inventories were purchased for Nornickel's core operations under the category procurement policies.

Nornickel's SAP SRM, an automated solution for supplier relationship management, provides its suppliers with anytime access to its tender process information and enables supplier feedback. Over 10 thousand potential suppliers have registered in the system, with 4,800 of them successfully passing accreditation.

SUPPLY CHAIN CONTROL

Supply chain management at Nornickel ensures continuous operation of the Group, high quality of its products, and reliable shipments to its customers. Nornickel is constantly striving to improve its supply chain performance by adopting global best practices and standards, optimising and automating business processes.

Given the diversity of Nornickel's business activities across a wide geography, efficient, timely and full provision of necessary resources is essential to the success of its business. Nornickel pays close attention

to fostering ties with reliable suppliers offering unique products that are critical to the Company's success in achieving its strategic goals. Nornickel is committed to increasing local content, which totalled 93% in 2020 (up 7% y-o-y). Long-term supply contracts are signed with certain producers.

Foreign suppliers are mainly engaged to deliver unique equipment or systems that do not have Russian alternatives.

Nornickel focuses on local sourcing to provide social support for its operating regions. Along with saving jobs, this policy supports unique enterprises whose continuous operation is essential to both the well-being of their employees and the social fabric of local communities.

ESG-DRIVEN SUPPLIER SELECTION

In engaging with suppliers and other counterparties, Nornickel, in addition to requirements for product/service quality, pricing and delivery timelines, focuses on three sustainability pillars: environmental safety of operations and supplied products; health and safety compliance; and contribution to the social development of local communities.

Prior to engaging any supplier, the Company signs a Master Agreement setting out the requirements for shipping documents, including for hazardous cargoes, and certification and labelling. The Master Agreement commits suppliers to comply with the following standards:

- Human rights, including freedom of association and zero tolerance to discrimination and retaliation
- Labour relations, including requirements on working conditions and remuneration, and prevention of child and forced labour
- Environmental protection
- Anti-corruption
- UN Global Compact

To mitigate potential negative environmental impact of the cargo in transit, the Company includes a separate clause in the Master Agreement with requirements for cargo packaging. Cargoes to be shipped must meet cargo standards and requirements of GOST 26653–2015 Preparation of general cargoes for transportation and GOST 15846–2002 Production for transportation to the areas of the Far North and similar regions. Packing, marking, transportation and storage. There is a mandatory requirement for transport containers and product packaging to ensure the integrity of cargo during multiple transshipments and transportation legs on a route to the Far North.

Environmental impact is assessed throughout the life cycle of purchased products, including production, transport, storage, use and disposal. Nornickel requires its contractors to have a functioning environmental management system in place and to ensure that all services and products supplied by them comply with local environmental laws.

The anti-corruption clause included in the Master Agreement outlines the course of action to be taken between the counterparty and Nornickel with respect to various risks of abuse. By signing the Master Agreement, counterparties acknowledge that they have read MMK Norilsk Nickel's Anti-Corruption Policy published in the anti-corruption section on Nornickel's website ([see Preventing and Combatting Corruption](#)).

The Company also expects its counterparties to comply with global best practices in sustainable use of natural resources and with Nornickel's key policies such as the Human Rights Policy, Working Conditions Policy, Occupational Health and Safety Policy, Freedom of Association Policy and Equal Opportunities Programme. The Supplier Code of Conduct will be developed in Q2 2021 to fulfil Nornickel's responsibility toward ESG issues for entire supply chain.

ENERGY ASSETS

Nornickel owns an integrated network of fuel and energy assets, including four hydrocarbon deposits.

Most of Nornickel's production facilities are located beyond the Arctic Circle, operating in sub-zero temperatures for eight months of the year. It is therefore critical for the Group to ensure energy supplies to its production and infrastructure facilities, as well as to communities in its regions of operation.

Norilskgazprom (100% stake) produces gas and gas condensate at the Pelyatkinskoye, Yuzhno-Soleninskoye and Severo-Soleninskoye gas condensate fields, as well as the Messoyakhskoye gas field.

2,728 Mcm¹
natural gas production

114 kt
— gas condensate production

46%
— electricity generated from renewable sources

| *Start of production: 1969*

Gas reserves
244 bcm

Gas condensate reserves:
4,576 kt

MINING VOLUME

Asset	2018	2019	2020
Natural gas, Mcm	2,896	2,804	2,728
Taimyrgaz ²	2,027	0	0
Norilskgazprom	869	2,804	2,728
Gas condensate, kt	90	92	114
Taimyrgaz ²	88	0	0
Norilskgazprom	2	92	114

¹ Data on gas condensate production include production losses (carryover with separation gas

² in 2019 was the reorganisation of Taimyrgaz.

Norilsktransgaz (100% stake) transports natural gas and gas condensate from deposits to consumers.

The length of gas and gas condensate pipelines totals 1,602.5 km. The pipelines were commissioned between 1969 and 2018.

NTEK (100% stake) is focused on electricity and heat generation, transmission and sales harnessing the assets of Norilskenergo, a branch of Nornickel. Energy is produced from both renewable (e.g. hydropower) and non-renewable (e.g. natural gas) sources. NTEK supplies electricity, heat, and water to households in the city of Norilsk and to all production facilities within the Norilsk Industrial District. In terms of its location and operational mode, the local electricity grid is isolated from the national grid (the Unified Energy System of Russia), which means stricter reliability requirements. NTEK operates five generating facilities – three thermal power plants with installed electricity generation capacity of 1,115 MW, and two hydropower plants (HPPs) with total installed capacity of 1,101 MW. The total installed capacity of all plants is 2,216 MW.

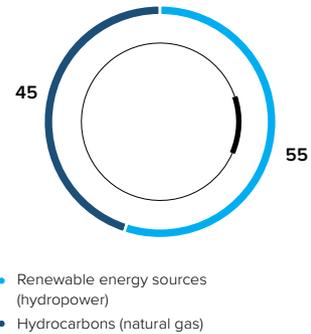
Ust-Khantayskaya and Kureyskaya HPPs are Nornickel’s two renewable electricity generation facilities. In 2020, renewables accounted for 46% of total electricity consumed by the Group and 55% of total electricity consumption within the Norilsk Industrial District.

To boost the share of renewables such as hydropower, capture fuel and energy savings, and improve the reliability of energy and gas supplies, Nornickel’s investment programme contains a number of large-scale priority projects. Selected major projects being implemented by Nornickel to improve equipment reliability, enhance energy efficiency, and boost product output:

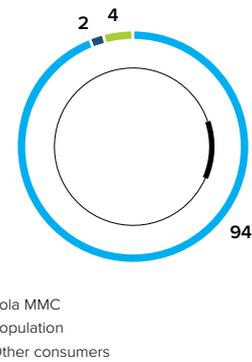
- Replacement of seven hydropower units at Ust-Khantayskaya HPP
- Replacement of power units at CHPP-2 and CHPP-3 in Norilsk
- Upgrade of power grids, main gas pipelines, and gas distribution networks within the Norilsk Industrial District

Arctic-Energo (100% stake) supplies electricity to Kola MMC and other Group entities in the Murmansk Region, is a default electricity supplier within its area of operations and has the right to trade in the wholesale electricity and capacity market. The company was established to ensure energy independence, efficient and uninterrupted electricity supply at cheapest rates to Kola MMC operations. In 2020, it sold 2,596,781 thousand kWh of electricity.

POWER GENERATION BREAKDOWN IN THE NORILSK INDUSTRIAL DISTRICT IN 2020 (%)



ARCTIC-ENERGO ELECTRICITY SALES BREAKDOWN IN 2020 (IN KOLA PENINSULA) (%)



TRANSPORT ASSETS



Norilsk Nickel's transportation and logistics assets include:

- sea fleet – six heavy ice-class vessels
- river fleet – 627 vessels (including 198 self-propelled and 429 towed vessels)
- rail car and locomotive fleet – 118 container flatcars, one switch locomotive, one Yermak electric locomotive (sold in 2020), and one 2M62 diesel locomotive
- aircraft fleet – 18 helicopters operated by Norilsk Avia and 15 airplanes operated by NordStar Airlines.

Nornickel owns a modern transport infrastructure capable of handling most challenging freight logistics tasks and ensuring continuity and sustainability of operations of the Group's enterprises. Nornickel's transportation and logistics assets cover the full range of transportation and freight forwarding services.

FREIGHT SHIPPING SERVICES

Nornickel has a unique Arctic fleet comprising five dry cargo vessels and one Yenisey heavy ice-class tanker (Arc7 as per the classification of the Russian Maritime Register of Shipping). The vessels are capable of breaking through Arctic ice up to 1.5 m thick without icebreaker support. The Yenisey tanker carries gas condensate exports from the Pelyatkinskoye gas condensate field to European ports and makes commercial voyages to other destinations.

AVIATION ASSETS

Norilsk Avia (Nornickel interest 100%) serves the transportation needs of local communities in the Norilsk and Taimyrsky Dolgano-Nenetsky Districts of the Krasnoyarsk Region. The air carrier has its own fleet of 18 helicopters and provides air services related to the operations of the Norilsk Nickel Group, emergency air medical services, search and rescue operations, and local passenger traffic.

NordStar Airlines (Nornickel interest 100%) is an aviation project that has been steadily growing since its establishment in 2008. Its fleet comprises 15 aircraft. NordStar Airlines is a major air carrier in the Siberian Federal District and the anchor airline of Norilsk Airport.

The air carrier's annual passenger traffic is in excess of one million people. The airline's current route network covers over 30 cities in Russia and the CIS.

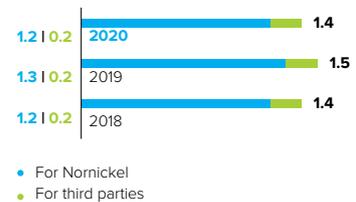
Nornickel's dry cargo fleet provides year-round freight shipping services between Dudinka, Murmansk, Arkhangelsk, Rotterdam, and Hamburg sea ports while also serving other destinations. In 2020, 66 voyages were made from Dudinka (2019: 68), including nine direct voyages to European ports (2019: 11).

Norilsk Airport (Nornickel interest 100%) is located 36 km away from Norilsk. It plays an essential role in ensuring the region's transport accessibility as it connects the north of the Krasnoyarsk Region with other parts of Russia.

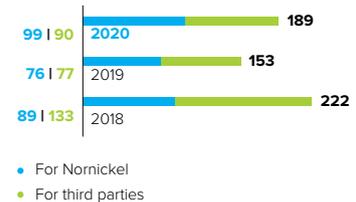
Between 2015 and 2020, the public-private partnership between Nornickel and the Federal Agency for Air Transport (Rosaviatsiya) renovated the airfield complex and airport infrastructure.

The renovated Norilsk Airport meets all current regulatory requirements, offering higher quality and safety standards and ensuring reliable and consistent passenger and freight transportation services.

DRY CARGO TRANSPORTATION BY NORNICHEL'S FLEET (MLN T)



TRANSPORTATION BY YENISEY TANKER (KT)



TRANSPORT DIVISIONS AND PORTS

The Polar Transport Division and Dudinka Port are the key industrial facilities of the city port of Dudinka, accessible by both sea and river vessels.

Located in the Far North, Dudinka Port is the world's only port that gets flooded every year during the spring thaw. From November to May, its water area and the Yenisey River freeze over. At this period, Dudinka Port handles only sea vessels using icebreakers to de-ice the berths and provide support during manoeuvring and mooring operations. In May and June, during the flooding, the service is suspended to be resumed for sea and river vessels when ice flows pass and the water level goes down.

Dudinka Port transships cargoes destined for the Taimyr Peninsula, including goods for local residents (except for perishables and mail). In summer, river vessels deliver equipment and materials (sand, round timber, clinker, etc.) for process needs from Krasnoyarsk and Lesosibirsk. Sulphur shipments are directed both via the Yenisey River and via sea routes. Converter matte and metal products are shipped by sea from Dudinka throughout the year.

The Polar Transport Division operates its own fleet of port service vessels which includes a river-class icebreaker, towboats, motorboats, a bunker barge, and a floating crane. To reduce its environmental footprint, the division runs programmes to cut fuel consumption and prevent pollution of the Dudinka and Yenisey Rivers while also investing in bioresource management (e.g. releasing fingerlings).

The year-round ice-free sea port of Murmansk is home to Nornickel's **Murmansk Transport Division**.

Murmansk Transport Division's key functions:

- Shipment of Nornickel's finished metal products from Murmansk to European ports

- Receipt of converter matte from Dudinka and its shipment by rail to Kola MMC
- Shipment of empty containers, equipment and materials to Dudinka

In addition to sea transportation, Murmansk Transport Division is focused on freight forwarding, transshipment and storage of cargoes, and rail transportation between Murmansk and Monchegorsk.

The division's shipping department complies with international maritime conventions by ensuring environmentally friendly and safe sea transportation, with the vessels undergoing regular scheduled repairs and safety inspections. In addition, in 2019, Murmansk Transport Division's Information Security Management System was certified to ISO/IEC 27001:2013.

Arkhangelsk Transport Division is based in Arkhangelsk. The division provides year-round transshipment services for Nornickel's cargo via Arkhangelsk sea port, which is conveniently linked to other Russian and foreign regions by road, air and rail.

Krasnoyarsk Transport Division is based in Krasnoyarsk. This division is responsible for transportation and forwarding of Nornickel's cargoes and for carriage of precious metal concentrates.

In 2019, Nornickel-YRSC (Nornickel interest 100%) was established to coordinate operations of Krasnoyarsk port and Yenisey River Shipping Company, which operate a strictly seasonal service due to the Yenisey River getting frozen in winter. When ice flows pass, the Group uses the ports to transship Nornickel's cargoes to Dudinka, including crushed rock, clinker, equipment, materials, and socially significant cargoes (as part of the Northern Deliveries programme).

CARGO TRAFFIC AT DUDINKA PORT (MLN T)



CARGO TRAFFIC AT MURMANSK TERMINAL (MLN T)



Yenisey River Shipping Company (Nornickel interest 82%) carries the bulk of the Group's and third-party cargoes shipped on the Yenisey River. The company owns over 600 river vessels, including self-propelled and towed ones. The fleet operates in the Yenisey, Angara, Nizhnyaya and Podkamennaya Tunguska Rivers, and their largest tributaries.

Krasnoyarsk River Port (Nornickel interest 89%) is one of the largest ports in the Yenisey basin. The port transships cargoes delivered by road, rail and water, provides storage services and transports cargoes using private railway lines. The port has three operating areas – Yenisey, Zlobino and Peschanka.

Lesosibirsk Port (Nornickel interest 51%) is located 40 km downstream of the point of confluence of the Angara and Yenisey Rivers and downstream of the hard-to-navigate rapids. This secures the delivery of Nornickel's cargoes at times of low water on the Yenisey and the use of fully loaded ships. The port's unique benefits:

- The only dedicated port on the Yenisey River capable of handling explosives with a storage option

- Offers year-round service (rail-to-road and road-to-rail cargo transshipment services in between the navigation periods)
- Has access to the Baikal (M53) federal highway via the Krasnoyarsk–Yeniseysk highway
- A railway to Achinsk links Lesosibirsk to the Trans-Siberian Railway

Bystrinsky Transport Division

was established in 2017 to support shipments of finished products from Bystrinsky GOK and handle its inventories. Bystrinsky Transport Division provides maintenance services for the 227-km Naryn (Borzya)–Gazimursky Zavod private railway line built through a public-private partnership.

INVESTMENT IN TRANSPORT AND LOGISTICS ASSETS

INVESTMENT

Expenditure	2018		2019		2020	
	USD mln	RUB bn	USD mln	RUB bn	USD mln	RUB bn
Capital construction	6.4	0.4	3.1	0.2	5.8	0.4
Equipment purchases	12.8	0.8	40.2	2.6	77.6	5.7
Other	15.9	1.0	12.4	0.8	12.3	0.9
Total	35.1	2.2	55.6	3.6	95.7	7.0

Higher CAPEX in 2020 vs 2019 was due to the programme to replace mobile harbour cranes in Dudinka Port, as well as the purchase of a new aircraft. In addition to the programme, in 2020, Nornickel completed scheduled repairs of vessels, overhauled several berths and harbour cranes, implemented projects to improve security and shift shore power supply from marine fuel-fired generation to power grids, introduced fuel consumption metering and upgraded marine equipment.

The Company's transport and logistics subsidiaries and units are fully environmentally permitted and compliant with applicable environmental regulations, namely:

- Air pollutant emissions from mobile sources do not exceed the maximum allowable levels
- Marine fuels are purchased from suppliers that have all required documents confirming fuel quality. The quality of fuel is verified by an independent laboratory

- Onboard wastewater treatment plants are subject to annual certification to prevent pollution and contamination of water bodies and marine environment
- Oily water is transferred to specialist contractors at sea ports

DIGITAL TRANSFORMATION JOURNEY

Nornickel has been consistently implementing a programme to improve its operational efficiency, including through the use of advanced information technologies. The Company is clearly ahead of the curve on technology adoption, rolling out multiple innovations that are unique in the industry. In 2020, Nornickel moved to the second phase of its IT strategy: advanced automation projects. Nornickel is already rolling out Industry 4.0 innovations across its operations and business activities, while our powerful IT infrastructure built out as part of Nornickel's digital transformation journey enabled fast response to the last year's unprecedented challenge and our continued operation throughout the pandemic.

IT INFRASTRUCTURE DEVELOPMENT

Nornickel's global IT strategy includes a programme to deploy high performance computing capabilities. The construction of a data centre in Moscow was the culmination of a major programme to build out a more resilient, advanced IT infrastructure. It also included projects to upgrade four data centres at the Polar Division and Kola MMC, build a company-wide backup system, create a new corporate-wide data transmission network, and build out a corporate services and infrastructure monitoring system. The IT infrastructure upgrade provided a solid foundation for Nornickel's further digital projects, from process automation to new ERP functionality, as well as ensured business

continuity throughout the pandemic. Over 14,000 Nornickel employees were shifted to work from home in the shortest timeframe while meeting all information security requirements.

Our near-term key priority in developing IT infrastructure is to enable ubiquitous access to data centre resources and ensure fast data sharing between all sites. This will significantly accelerate management decision-making and support it, among other things, by data from resource-intensive AI platforms. Further development in this area will also be focused around an effective scale-up and high availability. During the year, Nornickel kicked off its

private corporate cloud project, expected to dramatically accelerate IT infrastructure provisioning through automation. Within a few years, employees will be able to submit requests for a virtual machine or disk space via the self-service portal.

In 2020, Nornickel also launched a project to promote local solutions by upgrading technology networks through aggregation at a regional level and at our production sites. This includes networks to support projects within the Technology Breakthrough and Technology Breakthrough 2.0 programmes, as well as regional segments of the corporate network, including the creation of internet traffic filtering nodes.

BUSINESS APPLICATIONS

In 2020, Nornickel continued the successful automation of its key business processes through the implementation and rollout of corporate IT systems. For example, as part of digitising its document management, a document management system for binding B2B documents was deployed across pilot sites.

The project received an award for the Electronic Document Management Innovation of the Year at the CFO Russia contest. The number of users of the corporate document automated management & control system (CDAMCS) grew to 23,000, with an average of 4,000 documents and 6,000 orders generated in CDAMCS on a daily basis.

The Company also completed a project for comprehensive internal audit automation based on the SAP Audit Management solution to improve its audit processes and speed up analytical reporting. The project significantly boosted the reliability and performance of our corporate reporting, with 350 new users connected to the corporate data warehouse.

As part of net working capital optimisation, an IT service was set up to identify comparable inventories. Over 10,000 comparable products were identified in 2020, which allowed increasing the use of stale stocks in production processes. We have deployed RPA solutions across over 40 new use cases, with 40,000 Group employees already connected to the Nika virtual assistant.

Nornickel places a particular emphasis on improving industrial safety. In 2020, three more Group companies rolled out a video analytics system to monitor the use of personal protective equipment. The pilot implementation of the Control, Management, Safety system was also successfully completed, covering 70 OHS

business processes. The system captures 700 behavioural safety audits and issues over 30 work permits on a daily basis.

Active digitisation of the Company's HR processes is also ongoing. In 2020, Nornickel completed the rollout of its HR management system, with the project covering 53 branches and legal entities across 12 cities within our footprint. The system has 4,500 users while 22,000 employees are using self-service products. In 2020, the project won the SAP Quality Award as the most ambitious business transformation project.

The Company also launched an onboarding solution to improve the engagement and performance of its

new hires. The solution is integrated with the Nika virtual assistant: employees can use the chat-bot to get updated on their tailored onboarding plan tasks, find out more about the Company and fill in the necessary questionnaires.

Progress on the social agenda included the deployment of an integrated software suite for the Your Home housing programme. The service automates the processes for engaging and recording the performance under the corporate programme for relocating employees from the Far North.

IMPROVING DIGITAL LITERACY

Our IT function is actively developing the Digital Nornickel educational programme, which focuses primarily on improving the digital literacy of Company employees and enhancing their digital skills and knowledge. This list includes both basic IT competencies (knowledge of office applications

and other software, messengers, electronic document management, etc.) and more advanced competencies such as coding, RPA basics, understanding and use of innovative technology: machine vision, digital twins, big data, virtual reality and artificial intelligence. 12 interactive courses under the IT

and Digitalisation programme are already available on the Nornickel Academy portal. More than 500 employees took the courses over several months, while over 4,000 users successfully completed the Digital Literacy online course via the Tsifronikel mobile app.

DIGITAL LAB

Digital Lab (Nornickel's R&D function) is responsible for implementing innovative technology at Nornickel, exploring the applicability of innovations to the Company's operating processes and testing them.

In 2020, as part of measures to prevent the spread of COVID-19, the Digital Lab explored the use of a disinfecting robot in office spaces and the use of video surveillance to monitor mask-wearing.

The Digital Lab's pipeline of environmental initiatives included a number of projects to reduce the Company's environmental footprint:

- The Digital Tailings Dump, an integrated solution that combines automation and autonomous monitoring tools to ensure effective and safe operation of hydraulic structures. The technology includes space imagery using the InSAR method (a satellite-based radar technique used in geodesy), UAV surveys of the dam (using photogrammetric survey to create a 3D model of the tailings facility and detect weak zones in the hydraulic structure), as well

as bathymetry of the pond bottom using an autonomous echoboat – a special boat carrying a geodetic-grade high-precision echo sounder and GPS receiver. The devices digitise the bottom surface and transmit the data to the operator's computer via an industrial Wi-Fi network)

- SO₂ Emissions Monitoring in Monchegorsk, driven by a hardware and software system designed to monitor air pollution and inform preventive measures
- An innovative oil filter designed to reduce the consumption of fuel and lubricants in rail transport

30% of the initiatives within the Digital Lab's 2021 portfolio are related to the environment.

The Lab's operating model is fully integrated into the Company's ongoing operational excellence programme. The Digital Lab seeks out innovative solutions to do more and better with less. The economic benefits generated by the Digital Lab's activities over 2018–2020 total RUB 650 million (USD 9 million).

collected by the Digital Lab at production units.

>200 ideas

The Digital Lab's research pipeline contains

>70 initiatives.

The use of the Digital Twin technology is a key focus area for the Digital Lab, which has already enabled a number of innovative solutions:

- An advisory system at Kola MMC's Concentrator, which increased component extraction by 0.73% from the baseline period
- A Digital Twin in the main aisle of Copper Plant's smelting shop – a system for optimising in-process logistics of the converter operations through the use of digital tools for real-time charge planning
- The Digital Core, a software suite that uses machine vision components in combination with neural network algorithms to enable the online detection and analysis of ore present in a core using a photograph, as well as highly accurate estimates of mineralisation grades.

As part of the efforts to ensure safety and drive operational efficiency at Kola MMC's Severny Mine, the Digital Lab tested a prototype of an autonomous UAV to inspect the workings. The drone's built-in navigation allows it to fly without connecting to GPS/GLONASS while

video-recording the surrounding space to build a horizontal section of the area. The solution can survey workings that cannot be accessed by people or machinery.

Awards and partnerships

The Digital Lab's initiatives consistently generate strong interest and recognition from the industry. Its projects won awards at the Mine Digital contest of innovative solutions and technologies for digital transformation of the mining industry held as part of the MINEX Russia 2020 Mining & Exploration Forum. The Intelligent Automated Process Control System at Kola MMC's Concentrator project was the gold winner while the Digital Core project won the bronze award.

Also in 2020, a cooperation agreement was signed between Nor Nickel and Gazprom Neft for the development and implementation of digital products and industrial exoskeletons designed by the Digital Lab.

BIG DATA

In 2020, the Nor Nickel – Shared Services Centre data analytics group used machine learning to develop and test a number of systems to optimise concentration processes at the Talnakh Concentrator. The implemented algorithms provide real-time recommendations on ore milling and floatation. The process aims to increase metal recovery in concentrate.

Plans are in place to roll out the new approaches to the Company's other concentrators over the next few years.

CREATING A DATA LAKE

In 2020, Nornickel set out to create a corporate data lake, a latest-generation data processing and storage platform with a number of advantages over incumbent architecture solutions:

- Storage and efficient processing of extra-large data sets – millions of gigabytes or more
- Ease of horizontal scaling
- Integration of diverse data sources with both structured and unstructured data
- Advanced business analytics including predictive analytics and data processing with machine learning algorithms
- Near real-time data delivery from source to the end user of business analytics
- Effective change management: short lead time from business need definition to implementation and productive use

The corporate data lake will help reinvent Nornickel’s consolidated data assets (including entirely new data sources ranging from video files to social media data) to capture value and boost operational efficiency.

Kola MMC was selected as a pilot site to launch a data lake prototype. The effort covered two business segments: HR management and production process management. Five prototypes of business solutions were implemented as Tableau dashboards:

- Production data deviation monitoring, a system to support process operator decisions on selecting optimal equipment operating parameters
- Production data quality monitoring, a control tower to detect and forecast abnormal equipment

behaviour, with event logging and follow-up examination and corrective actions

- Sick leave prediction model, a system to predict employee sick leaves mathematically
- Career development/multi-skilling, an analytics system to define a career path for each employee and identify high-potential employees that could add value to the business
- Actual employee attendance analysis, a business analytics tool for real-time monitoring of employee workplace attendance and systematic analysis of employee and department working time

SAP ERP

Nornickel consistently automates business activities of the Group companies to achieve a high level of optimisation across its operational, logistics, financial and HR processes. In 2020, the following support companies were successfully connected to the unified management system of the Company’s SAP ERP: Polar Construction Company, Nornickel – Shared Services Centre, Norilsk Avia, Norilsk Airport, Nortrans-Norilsk, Norilsk Plant and the Company’s transportation branches (at Dudinka, Krasnoyarsk, Arkhangelsk and Murmansk), etc. The unified management system already enables interactions between more than 17,000 users.

Over the next two years, the system is expected to be rolled out to Nornickel’s global sales network and a number of division-specific support companies, such as Norilsk Support Complex, Taimyr Fuel Company, Yenisey River Shipping Company, etc.

In parallel with the system’s roll-out, it will be continuously improved to capture additional business impacts. Under the SAP 2.0 development programme, the Company’s business units implement commercially viable (self-sustaining) initiatives for advanced automation with digital elements, e.g. Integrated Planning, Digital Treasury, and Tax Monitoring. Digital assistants, mobile solutions and analytics tools are developed under the programme. The Company’s

pilot project included 14 initiatives carefully selected out of 50 ideas based on the size of expected business impact.

Nornickel’s holistic approach to business process transformation and digitisation has earned international acclaim. The Company won the gold award in the Business Transformation category at SAP Quality Awards – 2019 for EMEA (Europe, Middle East and Africa). For over 15 years, this award has been given by an independent international judging panel to recognise high-quality, large-scale business transformations based on a SAP platform, and Nornickel did very well representing Russia amongst the world’s largest and most ambitious leaders in SAP-driven business transformation and performance improvement.

SMART CITY

Nornickel is also actively contributing to social projects. In 2019, the Company launched the Smart City project positioned as a new business segment and implemented in three phases until 2025. The project is aimed at the digital transformation of cities, harnessing innovative technology for an easier and more comfortable life for city dwellers.

In 2020, during the first phase of the project, Nornickel subsidiary Edinstvo launched the City Online platform in five cities: Norilsk, Dudinka, Monchegorsk, Murmansk and Krasnoyarsk. This digital solution was developed to improve quality of life and enhance urban management systems in northern cities and open up additional opportunities for business development.

The new platform received positive user feedback: support for its launch by city administrations; high focus group ratings (scores of more than eight points out of ten); early customer satisfaction metrics NPS = 7 and SCl = 78%; 68,000 unique users as at 15 December 2020.

A total of 14 products have been implemented on the platform, which is above target; however the product mix roll-out was adjusted to incorporate market feedback, prioritising the launches of traffic generating services and postponing some commercial service launches until 2021.

Preparations for future scale-up in 2020 included establishing close relations with the Ministry for the Development of the Russian Far East and Arctic, setting

up a working group with representatives from 12 cities, diagnostics of urban needs, obtaining confirmations of interest in Edinstvo's offer from most cities, identifying the scale-up approach and getting it approved by the ministry, and identifying opportunities for co-financing and platform launches in small and medium towns.

The portal features telemedicine and remote learning services as well as news and upcoming events. SME support, urban online voting, utility bill payment, public transport tracking and monitoring, further education, professional development, and other services are expected to be added shortly. The platform is available both online and as a mobile app.

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¹ NPS = 34 based on focus group data; NPS = 20 based on both survey and focus group research; NPS = 7 based on surveys only, excluding focus group data.

PRODUCTION AUTOMATION

TECHNOLOGY BREAKTHROUGH PROGRAMME

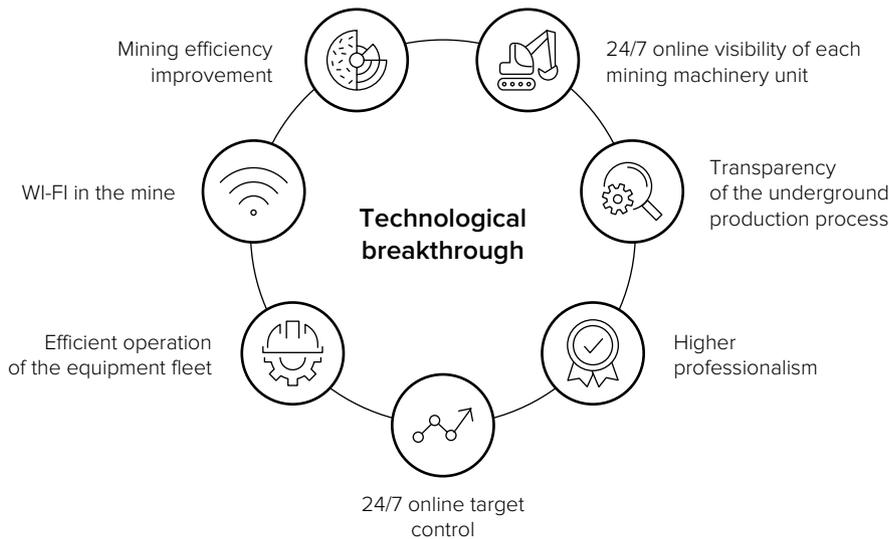
In 2015, as part of basic production automation, Nornickel launched the Technology Breakthrough programme running from December 2015 to April 2021.

The programme's key objective is to embed all operating processes in a new effective system of multiple option planning and automated day-to-day monitoring, aligning performance with KPIs.

By December 2020, 26 IT projects were implemented under the Technology Breakthrough programme, 31 IT systems were developed and put into operation at all relevant sites, and 2,418 users were connected.

UNDERGROUND INFRASTRUCTURE AND DISPATCH PROGRAMME

UNDERGROUND INFRASTRUCTURE AND MINING CONTROL



>70 km
of cable laid

365
contact points established

386
self-propelled diesel equipment items equipped

>500
employees trained

EXECUTION CONTROL

- Mining plan implementation
- In-mine ore movement control
- Hourly performance profile

PRODUCTION CULTURE

- Execution discipline
- Employee qualifications data

STATISTICS

- Mining operations performed
- Equipment use statistics

In 2018, a separate programme was spun off from the Technology Breakthrough programme – Underground Infrastructure and Mining Operations Dispatch that comprises six IT projects to be implemented between July 2018 and December 2020.

All systems were put into operation at all relevant sites in 2020, and in December 2020, the Underground Infrastructure and Mining Operations Dispatch programme was completed with the following measures implemented:

- Dispatch control over rock delivery from the mine face to the ore pass and further from the ore pass to the intermediate stockpile (autonomous haul trucks, rail transport)
- Dispatch control over drilling operations

More than 70 km of fibre was laid in mines, 365 access points were installed to provide Wi-Fi coverage, 386 pieces of mining equipment were connected, and more than 500 specialists were trained.

At the same time, the progress on the mining and ore transportation plan is monitored online 24/7. These measures helped enhance the production culture and execution discipline.

EFFECTIVE SOLUTIONS FOR PRODUCTION MANAGEMENT

By end-2020, upon completion of the Technology Breakthrough and Underground Infrastructure and Mining Operations Dispatch programmes, the Company implemented unique solutions that significantly improved production management efficiency. The solutions were deployed across all production operations, from ore mining to metals production.

INDUSTRIAL SAFETY MANAGEMENT

The Control, Management, Safety system was designed to collect, process, record and analyse health and safety data. The system's main objectives are to automate labour-intensive and routine functions associated with health and safety processes and to create a single information environment for its users. This will reduce time and information constraints when making management decisions, and improve the quality and efficiency of industrial safety processes.

PRODUCTION DISPATCH

All key processes in the Company are controlled from control centres at the Norilsk and Kola Division, covering a total of 18 operating units. Dispatch control allowed the Company to completely abandon collecting information by phone and recording it on paper. By automating the collection of data from production chains, Nornickel is able to effectively calculate and monitor process and production parameters, including development of production plans and schedules and progress monitoring in real time.

METALS BALANCE

Based on real-time data, all production units simultaneously prepare metals inventory plans, enabling detailed, granular views into metal-bearing products at each production stage, and accurate real-time control over commodity flows within the Company and the actual volume of products manufactured.

GEOLOGICAL MODELLING AND MINE PLANNING SOLUTIONS

By deploying geological modelling and mine planning solutions, the Company was able to develop a single mining database, design underground workings and obtain survey data. 3D models of underground ore bodies or workings can be displayed at any time to assess the current situation in a mine. The system enables the preparation and feeding to automated drill rigs of electronic data sheets, with significant gains to be achieved in drilling and blasting performance.

SIMULATION MODELLING SYSTEM

The simulation modelling system enables the development and prompt analysis of mining plan options to select the best ones. To make it possible, more than 500 pieces of equipment were modelled, including LHDs, autonomous haul trucks and self-propelled drilling rigs, electric locomotives and skip shafts. Simulation models comprise data on 5,000 underground workings and their characteristics. Nornickel plans to create a single simulation model covering all production operations – a full digital twin that will feature optimal operation modes to manage all processes in the Company, based on modelling and big data.

PRODUCT QUALITY MANAGEMENT

LIMS (Laboratory Information Management System) automates operations at control and analysis centres and supports the entire cycle of quality control processes, from sample registration to reporting on test

results. With LIMS, Nornickel has centralised the collection and storage of all information about laboratories' activities and ensured its reliability and confidentiality.

ENERGY ACCOUNTING

The automated system for commercial energy accounting monitors the consumption of electricity, heat, gas, cold water, as well as industrial oxygen and compressed air in real time. Thanks to the energy accounting system, enterprise managers will be able to see the actual consumption of all resources at once, track any deviations from the planned parameters, and decide on necessary measures to ensure efficient use of resources.

TECHNOLOGY BREAKTHROUGH 2.0 PROGRAMME

In 2020, the Company launched the Technology Breakthrough 2.0 programme, which, in turn, includes 10 sub-programmes. Business milestones have already been set for each sub-programme, with a roadmap consisting of 42 IT initiatives and IT projects to achieve these milestones.

The Technology Breakthrough 2.0 Programme is planned to be implemented within five years with a total budget of RUB 6.5 billion.

Our experience in implementing projects across existing operations over the last five years gives us confidence that we will also successfully complete Technology Breakthrough 2.0.

To sum up, between 2015 and 2020:

- all projects approved for implementation were completed
- the targeted outcomes and outputs were achieved under the Technology Breakthrough and Underground Infrastructure and Dispatch programmes

- a 2020–2024 further development plan was prepared.

TRANSITION FROM BASIC AUTOMATION TO DIGITAL OPERATIONS

In 2020, the Company completed the basic automation of its production processes, with 31 information systems (including systems developed under the Technology Breakthrough and Underground Infrastructure and Dispatch programmes) deployed and put into operation with more than 3,000 active users.

As a result of basic production automation, all underground mines were equipped with positioning and communication systems. A powerful system was created to feed data from the surface underground and back. All in all, we have created the basic infrastructure to manage mining operations.

We collected and digitised all equipment data sheets and process sheets for the most critical equipment, which allows effective production asset management via a unified system. The deployment of geological and mining information systems has enabled us to develop a single mining database and 3-D models of underground ore bodies, design mine workings and

OPERATIONAL EXCELLENCE

Improved production asset performance

- Reliability management
- EBITDA@RISK modelling
- Workload management

Improved energy efficiency

- Energy management
- Energy balance

Lights-out/autonomous operation

- Automatic management of self-propelled drilling rigs during extraction and shaft sinking operations
- Autonomous remote management of electric locomotive haulage
- Autonomous remote management of self-propelled diesel vehicles

Improved efficiency of mining and exploration operations

- Processing and analysis of mining and geological data
- Licence risk management

Production planning and management

- Precious metal balance
- Inventory and semi-product movement accounting
- Management of ore dressing, charge blending and concentration processes with forecasting

- Day-to-day planning of mining and metallurgical operations
- Modelling the content of valuable components in the ore released and optimising the release strategy

Process data analysis

Occupational safety

- Occupational health
- Smart PPE and intelligent analytics
- Contractor management
- Mobile solutions

IP asset management

Digital model to manage capex projects

- Digital construction control
- Netgroup management
- Interactive and analytical reports
- Database of resource and process models

Investment activities

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manage mine survey information. 100% of ore bodies and measured reserves of the Company have been digitised, with mining plans designed based on this data. Local mining projects have also been fully digitised in 3D.

The mining plans generated by the geological and mining information systems are promptly checked for feasibility in a simulation modelling system. The mine simulation model can simulate the implementation of the annual programme in less than 10 minutes, factoring in:

- the actual geometry of the transport network
- the position of mine workings
- the operation of the core and some of the auxiliary equipment
- the actual performance parameters of the equipment
- the mine's operating mode
- emergency and scheduled repairs
- restrictions during blasting and venting operations.

Moreover, the system's deployment delivered significant economic benefits, sparing the need to purchase 40 units

of mining equipment. Currently, over 80% of operations (all key processes) are monitored in real time from control centres at the Company's Polar Division and Kola MMC.

Based on real-time data, all production units simultaneously prepare metals inventory plans, enabling detailed, granular views into metal-bearing products at each production stage, and accurate real-time control over commodity flows within the Company and the actual volume of products manufactured.

All energy consumption is also metered in real time now. Data from the core process equipment is fed into the process data storage, which captures over 100 thousand parameters collected from the Company's enterprises.

We also made further progress towards the Company's digital future, with plans for remote equipment control, big data analytics, AI-based decision making and unmanned mines where human involvement in the production process will be minimised. We are currently working on unmanned solutions

and have already obtained the first results. For example, in February 2020, Russia's first unmanned autonomous haul truck was successfully tested at a Nor Nickel mine. Through this entire transformation journey, we will build highly effective and agile digital operations with advanced business processes.

AWARDS OF THE TECHNOLOGY BREAKTHROUGH PROGRAMME

Industry experts have been long interested in and recognised the contribution of the industrial automation projects integrated into the Company's ambitious Technology Breakthrough programme to improve operational efficiency of operations. In October 2020, the Company was given the Russian Mining Award for its Underground Infrastructure and Dispatch programme implemented at seven mines. The Technology Breakthrough programme has a total of eight awards.

FINANCIAL PERFORMANCE (MD&A)

2020 HIGHLIGHTS

Consolidated revenue increased 15% y-o-y to USD 15.5 billion owing to higher prices of palladium and rhodium as well as the scheduled ramp-up of Bystrinsky project.

EBITDA decreased 3% y-o-y to USD 7.7 billion due to the USD 2 billion environmental provision related to the reimbursement of environmental damages caused by the fuel spill in Norilsk industrial district, expenses related to containment of COVID-19 spread and increase of inventory of saleable metals.

CAPEX increased 33% y-o-y to USD 1.8 billion owing to the execution of mining projects at Talnakh ore cluster, development of South Cluster, increased capital repairs of energy infrastructure, investments into improvement of industrial safety as well as the launch of an active construction phase of the Sulfur project.

Net working capital decreased 28% to USD 0.7 billion mainly driven by the depreciation of the Russian rouble and changes in income tax payable, which was partly compensated by increase of inventory of saleable metals.

Free cash flow increased 36% y-o-y to USD 6.6 billion driven by higher revenue and scheduled ramp-up of Bystrinsky project.

Net debt was down 33% y-o-y to USD 4.7 billion. Net debt/EBITDA ratio decreased to 0.6x as of December 31, 2020. The Company's financial stability was confirmed by investment grade credit ratings from all three major rating agencies.

On 29 May 2020, diesel fuel leaked from the emergency fuel tank at the heat and power plant N°3 (HPP-3) due to sudden sinking of support posts based in permafrost. By now, the main phase of the clean-up operations has been completed.

On September 10, 2020, the Federal Service for Supervision of Natural Resources ("Rosprirodnadzor") filed a claim with the Arbitration Court of the Krasnoyarsk region seeking compensation from the Company of damages caused to the environment in the amount of RUR 147.78 billion (or approximately USD 2 billion).

In September 2020, the Company successfully placed a 5-year USD 500 million eurobond offering with a record low annual coupon rate of 2.55%.

In December 2020, in line with its complex environmental programme the Company shut down a smelter at Nickel town (Kola GMK), which resulted in the complete elimination of sulphur dioxide emissions in the cross-border area with Norway and alongside other environmental initiatives should enable a reduction of sulphur dioxide emissions in the Murmansk region by 85% by the end of 2021.

In response to coronavirus, the Company provided a comprehensive support to safeguard the health and safety of its employees and regional communities. In total, the Group spent USD 157 million net of VAT to prevent and combat spread of COVID-19.

Starting from 2021, Mineral Extraction Tax has been increased 3.5x for certain minerals, including ores mined by Norilsk Nickel.

RECENT DEVELOPMENTS

In January 2021, investment tokens backed by physical metal were issued using EU-registered financial vehicle listed on Deutsche Börse and London Stock Exchange;

On February 5, 2021, Arbitration Court of Krasnoyarsk Krai announced that it decided to award diesel spill damages claimed by Rosprirodnadzor in the amount of RUB 146.2 billion

(USD 1,979 million at the exchange rate as of December 31, 2020). The Company has set up a provision that fully covers both the damages and the expenses related to liquidation of incident consequences and rehabilitation of disturbed area. The decision of the Krasnoyarsk Region Arbitration Court was implemented on 10 March 2021.

On February 12, 2021, the Company made an early repayment of exchange-traded bonds in the amount of RUB 15 billion (USD 203 million at the exchange rate as of 31 December 2020).

KEY CORPORATE HIGHLIGHTS (USD MILLION)

Index	2020	2019	Change
Revenue	15,545	13,563	15%
EBITDA ¹	7,651	7,923	(3%)
EBITDA margin	49%	58%	(9 p. p.)
Net profit	3,634	5,966	(39%)
Capital expenditures	1,760	1,324	33%
Free cash flow ²	6,640	4,889	36%
Normalized net working capital ^{2,3}	712	985	(28%)
Net debt ²	4,705	7,060	(33%)
Net debt, normalized for the purpose of dividend calculation ⁴	3,469	4,952	(30%)
Net debt/12M EBITDA	0.6x	0.9x	(0.3x)
Net debt/12M EBITDA for dividends calculation	0.5x	0.6x	(0.1x)
Dividends paid per share (USD) ⁵	26.3	26.3	0%

¹ A non-IFRS measure, for the calculation see the notes below.

² A non-IFRS measure, for the calculation see an analytical review document ("Data book") available in conjunction with Consolidated IFRS Financial Results on the Company's web site.

³ Paid during the current period

⁴ Normalized on interim dividends (at the rate of the Board of Directors meeting date) and deposits with maturity of more than 90 days

⁵ Normalized on receivables from the registrar on transfer of dividends to shareholders

KEY SEGMENTAL HIGHLIGHTS¹ (USD MILLION (UNLESS STATED OTHERWISE))

Index	2020	2019	Change
Revenue	15,545	13,563	15%
GMK Group	12,700	13,836	(8%)
South cluster	694	864	(20%)
KGMK Group	8,926	3,115	3x
NN Harjavalta	1,308	1,172	12%
GRK Bystrinskoye	1,004	201	5x
Other mining	137	133	3%
Other non-metallurgical	1,387	1,412	(2%)
Eliminations	(10,611)	(7,170)	48%
EBITDA	7,651	7,923	(3%)
GMK Group	6,171	9,522	(35%)
South cluster	407	475	(14%)
KGMK Group	1,757	58	30x
NN Harjavalta	70	74	(5%)
GRK Bystrinskoye	717	349	2x
Other mining	(14)	(31)	(55%)
Other non-metallurgical	31	31	0%
Eliminations	(556)	(1,770)	(69%)
Unallocated	(932)	(785)	19%
EBITDA margin	49%	58%	(9 p. p.)
GMK Group	49%	69%	(20 p. p.)
South cluster	59%	55%	4 p. p.
KGMK Group	20%	2%	18 p. p.
NN Harjavalta	5%	6%	(1 p. p.)
GRK Bystrinskoye	71%	n.a.	n.a.
Other mining	(10%)	(23%)	13 p. p.
Other non-metallurgical	2%	2%	0 p. p.

In 2020, revenue of GMK Group segment decreased 8% to USD 12,700 million primarily due to decrease in PGMs sales volumes that was partly compensated by higher palladium prices. PGMs sales volumes decreased due to the launch of direct sales of semi-products to KGMK Group in 1H2019 and higher base effect in 1H2019 owing to the release of work-in-progress inventory, which was exacerbated by decrease in palladium global demand owing to the coronavirus pandemic.

Revenue of South cluster segment decreased 20% to USD 694 million due to the launch of direct sales of semi-products to GMK Group in 1H2019.

Revenue of KGMK Group segment increased three times to USD 8,926 million due to the launch of direct sales of semi-products supplied by GMK Group segment and increase of sales of semi-products to GMK Group and NN Harjavalta.

Revenue of NN Harjavalta increased 12% to USD 1,308 million driven by higher palladium price and increase in sales volumes of semi-products, that was partly compensated by decrease in refined nickel sales volume.

Revenue of GRK Bystrinskoye amounted to USD 1,004 million, which included sales of semi-products since the full commissioning of Bystrinsky project in September 2019.

¹ Segments are defined in the consolidated financial statements

Revenue of Other mining segment increased 3% to USD 137 million driven by higher realized price of Nkomati nickel concentrate, that was partly compensated by decrease of it's sales volume.

Revenue of Other non-metallurgical segment decreased 2% to USD 1,387 million mostly owing to lower sales volumes from Palladium Fund and decrease in other sales due to depreciation of Russian rouble and negative effect of coronavirus pandemic that was partly compensated by higher palladium price.

In 2020, EBITDA of GMK Group segment decreased 35% to USD 6,171 million primarily owing to accrual of environmental provisions and decrease in revenue. EBITDA of GMK Group segment included profit from

the sale of semi-products to KGMK Group segment, which was eliminated from EBITDA of the Group.

EBITDA of South cluster segment decreased 14% to USD 407 million due to decrease in metal sales.

EBITDA of KGMK Group segment increased 30 times to USD 1,757 million primarily owing to the launch of direct sales of semi-products supplied by GMK Group segment.

EBITDA of NN Harjavalta decreased by USD 4 million to USD 70 million primarily driven by increase in transportation expenses due to the launch of semi-products sales to the GMK Group segment.

EBITDA of GRK Bystrinskoye segment increased 2 times to USD 717 million primarily due to higher production volumes since the full commissioning of Bystrinsky project in September 2019.

EBITDA of Other non-metallurgical segment was unchanged and amounted to USD 31 million.

EBITDA of Unallocated segment decreased by USD 147 million and amounted to a negative USD 932 million primarily driven by increase in social expenses.

SALES VOLUME AND REVENUE

Index	2020	2019	Change
Metal sales			
Group			
Nickel, thousand tons ²	221	230	(4%)
from own Russian feed	198	213	(7%)
from 3d parties feed	3	3	0%
in semi-products ³	20	14	43%
Copper, thousand tons ^{2,4}	500	479	4%
from own Russian feed	427	433	(1%)
in semi-products ³	73	46	59%
Palladium, koz ²	2,634	2,988	(12%)
from own Russian feed	2,604	2,890	(10%)
in semi-products ³	30	98	(69%)
Platinum, koz ²	689	714	(4%)
from own Russian feed	684	698	(2%)
in semi-products ³	5	16	(69%)
Rhodium, koz ²	58	78	(26%)
from own Russian feed	56	69	(19%)
in semi-products ³	2	9	(78%)
Cobalt, thousand tons ²	6	7	(14%)
from own Russian feed	5	7	(29%)
in semi-products ³	1	-	100%

² All information is reported on the 100% basis, excluding sales of refined metals purchased from third parties and semi-products purchased from Nkomati.

³ Metal volumes represent metals contained in semi-products.

⁴ Includes metals and semi-products purchased from third parties and Nkomati. Includes revenue from semi-products, produced by GRK "Bystrinskoye", after ramp-up of Bystrinsky project that was fully commissioned in September 2019.



Index	2020	2019	Change
Gold, koz ¹	386	235	64%
from own Russian feed	192	184	4%
in semi-products ²	194	51	4x
Average realized prices of refined metals produced by the Group			
Metal			
Nickel (USD per tonne)	13,916	14,355	(3%)
Copper (USD per tonne)	6,221	6,047	3%
Palladium (USD per oz)	2,176	1,524	43%
Platinum (USD per oz)	882	862	2%
Rhodium (USD per oz)	12,056	3,948	3x
Cobalt (USD per tonne)	30,745	26,756	15%
Gold (USD per oz)	1,764	1,393	27%
Revenue, USD million ³			
Nickel	3,144	3,388	(7%)
including semi-products	342	285	20%
Copper	3,078	2,877	7%
including semi-products	424	257	65%
Palladium	6,365	5,043	26%
including semi-products	147	194	(24%)
Platinum	622	628	(1%)
including semi-products	19	27	(30%)
Rhodium	682	291	2x
including semi-products	6	20	(70%)
Gold	676	328	2x
including semi-products	336	71	5x
Other metals	410	296	39%
including semi-products	224	81	3x
Revenue from metal sales	14,977	12,851	17%
Revenue from other sales	568	712	(20%)
Total revenue	15,545	13,563	15%

¹ All information is reported on the 100% basis, excluding sales of refined metals purchased from third parties and semi-products purchased from Nkomati.

² Metal volumes represent metals contained in semi-products.

³ Includes metals and semi-products purchased from third parties and Nkomati. Includes revenue from semi-products, produced by GRK "Bystrynskoe", after ramp-up of Bystrinsky project that was fully commissioned in September 2019.

REVENUE

NICKEL

Nickel sales contributed 21% to the Group's total metal revenue in 2020, down from 26% in 2019. This reduction in nickel share in metal revenue was primarily driven by the different price dynamics of nickel in comparison with other metals within the metal basket.

In 2020, nickel revenue was down 7% to USD 3,144 million. The decline was driven both by the decrease in sales volume (-USD 167 million) and lower realized nickel price (-USD 77 million).

The average realized price of refined nickel decreased 3% from USD 14,355 per tonne in 2019 to USD 13,916 per tonne in 2020.

Sales volume of refined nickel produced from own Russian feed, decreased 7% (or -15 thousand tonnes) to 198 thousand tonnes owing to the temporary accumulation of metal inventory following the weak demand for the metal amidst the coronavirus pandemic.

Sales volume of nickel produced from third-party feed remained unchanged and amounted to 3 thousand tonnes.

In 2020, sales of nickel in semi-products increased 20% to USD 342 million primarily owing to higher sales volume of semi-products.

COPPER

In 2020, copper sales accounted for 21% of the Group's total metal sales, increasing 7% (or +USD 201 million) to USD 3,078 million. The increase was driven by both higher sales volume (+USD 123 million) and realized copper price (+USD 78 million).

The average realized price of refined copper increased 3% from USD 6,047 per tonne in 2019 to USD 6,221 per tonne in 2020.

Physical volume of refined copper sales from the Company's own Russian feed decreased 1% (or -6 thousand tonnes) to 427 thousand tonnes primarily due to lower copper production from concentrate purchased from Rostec.

Revenue from copper in semi-products in 2020 increased 65% to USD 424 million primarily due to the production increase by the Bystrinsky project that was fully commissioned in September 2019.

PALLADIUM

In 2020, palladium accounted for 42% of total metal revenue, increasing 3 p.p. y-o-y. Palladium revenue increased 26% (or +USD 1,322 million) to USD 6,365 million due to higher realized price (+USD 1,954 million) which was partly offset by lower sales volume (-USD 741 million).

The average realized price of refined palladium increased 43% from USD 1,524 per troy ounce in 2019 to USD 2,176 per troy ounce in 2020.

Physical volume of refined palladium sales from the Company's own Russian feed decreased 10% (or -286 thousand troy ounces) to 2,604 thousand troy ounces in 2020. The decline in sales volume was primarily due to the weak palladium global demand owing to the coronavirus pandemic, as well as the launch of production using a new technology at the Kola MMC and higher base effect in 2019 owing to the release of work-in-progress inventory.

Revenue of palladium in semi-products decreased 24% to USD 147 million in 2020 primarily due to lower sales volume of semi-products resulting from processing of semi-products produced by NN Harjavalta at the Polar division refinery in 2020.

In 2020, revenue from the resale of palladium purchased from third parties amounted to USD 553 million (vs USD 444 million in 2019).

PLATINUM

In 2020, platinum sales decreased 1% (or -USD 6 million) to USD 622 million and accounted for 4% of the Group's total metal revenue. The decline of sales volume (-USD 21 million) was partly positively offset by the increase in realized platinum price (+USD 15 million).

Physical volume of refined platinum sales from the Company's own Russian feed decreased 2% (or -14 thousand troy ounces) to 684 thousand troy ounces

in 2020 primarily due to higher base effect in 2019 owing to the release of work-in-progress inventory.

Revenue of platinum in semi-products in 2020 decreased 30% to USD 19 million primarily due to lower sales volume of semi-products resulting from processing of semi-products produced by NN Harjavalta at the Polar division refinery in 2020.

OTHER METALS

In 2020, revenue from other metals increased 93% (or +USD 853 million) to USD 1,768 million. The main factors were:

- higher revenue from rhodium (+USD 391 million), primarily due to favorable pricing environment in 2020;
- higher revenue from gold (+USD 348 million) and iron ore concentrate (+USD 146 million), primarily due to the ramp-up of Bystrinsky project in September 2019.

OTHER SALES

In 2020, other sales decreased 20% to USD 568 million negatively impacted by the Russian rouble depreciation (-USD 69 million) and lower air transportation service revenue owing to the pandemic.

COST OF SALES

COST OF METAL SALES

In 2020, the cost of metal sales was unchanged amounting to USD 4,500 million, with the main impacts coming from the following changes:

- Increase in cash operating costs by 2% (or +USD 78 million);
- Increase in depreciation and amortisation by 15% (or +USD 110 million);
- Comparative effect of change in metal inventories y-o-y leading to cost of metal sales decrease of USD 187 million.

CASH OPERATING COSTS

In 2020, total cash operating costs increased 2% (or +USD 78 million) to USD 3,886 million.

The positive effect of Russian rouble depreciation (-USD 314 million) was partly compensated by inflationary growth of cash operating costs (+USD 69 million), higher mineral extraction tax and other levies (+USD 50 million), higher purchases of refined metals for resale (+USD 44 million) and expenses related to anti-COVID measures (+USD 55 million).

Cash operating costs also increased by USD 156 million y-o-y due to the full commissioning of Bystrinsky project in September 2019.

COSTS OF METAL SALES (USD MILLION)

Index	2020	2019	Change
Labour	1,307	1,295	1%
Materials and supplies	731	712	3%
Purchases of refined metals for resale	482	438	10%
Purchases of raw materials and semi-products	298	402	(26%)
Third party services	276	239	15%
Mineral extraction tax and other levies	248	221	12%
Electricity and heat energy	151	155	(3%)
Fuel	109	101	8%
Transportation expenses	90	78	15%
Sundry costs	194	167	16%
Total cash operating costs	3,886	3,808	2%
Depreciation and amortisation	845	735	15%
(Increase)/decrease in metal inventories	(231)	(44)	5x
Total cost of metal sales	4,500	4,499	0%

Labour

In 2020, labour costs increased 1% (or USD 12 million) to USD 1,307 million amounting to 34% of the Group's total cash operating costs driven by the following factors:

- -USD 129 million – positive effect of the Russian rouble depreciation against US dollar;
- +USD 56 million - indexation of salaries and wages in line with the terms of collective bargaining agreement;
- +USD 44 million - ramp-up of Bystrinsky project that was fully commissioned in September 2019;
- +USD 45 million – hardship payments to employees due to the pandemic.

Materials and supplies

In 2020, expenses for materials and supplies increased 3% (or USD 19 million) to USD 731 million driven by the following factors:

- -USD 72 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 38 million - ramp-up of Bystrinsky project that was fully commissioned in September 2019;

- +USD 35 million - higher consumption of materials primarily due to increased volume of repairs;
- +USD 5 million - higher materials expenses due to the pandemic;
- +USD 7 million - inflationary growth of materials and supplies expenses.

Purchases of refined metals for resale

In 2020, expenses related to purchase of refined metals for resale increased 10% (or USD 44 million) to USD 482 million owing to the increase in palladium price, which was partly compensated by lower purchase volume.

Purchases of raw materials and semi-products

In 2020, purchases of raw materials and semi-products decreased 26% (or USD 104 million) to USD 298 million mainly driven by lower processed volumes of Rostec concentrate.

Third-party services

In 2020, cost of third party services increased 15% (or USD 37 million) to USD 276 million mainly driven by:

- -USD 24 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 34 million - ramp-up of Bystrinsky project that was fully commissioned in September 2019;
- -USD 16 million - lower Nkomati production volumes;
- +USD 29 million – increase in repair services;
- +USD 11 million - inflationary growth of third-party services.

Mineral extraction tax and other levies

In 2020, mineral extraction tax and other levies increased 12% (or USD 27 million) to USD 248 million driven by the following factors:

- USD 23 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 50 million – primarily increase in payments related to negative environmental impact due to changes in the legislation.

Electricity and heat energy

In 2020, electricity and heat energy expenses decreased by USD 4 million to USD 151 million driven by the following:

- USD 11 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 7 million - ramp-up of Bystrinsky project that was fully commissioned in September 2019.

Fuel

In 2020, fuel expenses increased by 8% (or USD 8 million) to USD 109 million driven by the following factors:

- USD 10 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 18 million - ramp-up of Bystrinsky project that was fully commissioned in September 2019.

Transportation expenses

In 2020, transportation expenses increased 15% (or +USD 12 million) to USD 90 million driven by the following factors:

- USD 6 million - positive effect of the Russian rouble depreciation against US dollar;
- +USD 3 million - inflationary growth of expenses;
- +USD 15 million – primarily increase in transportation expenses in Norilsk industrial region.

Sundry costs

In 2020, sundry costs increased 16% (or +USD 27 million) to USD 194 million mainly driven by the commissioning of Bystrinsky project and higher expenses in Norilsk industrial region.

Depreciation and amortisation

In 2020, depreciation and amortisation expenses increased 15% (or USD 110 million) to USD 845 million.

Positive effect of the Russian rouble depreciation amounted to -USD 72 million.

Depreciation charges in real terms increased by USD 182 million mainly due to transfers from construction in progress to production assets including the full commissioning of Bystrinsky project and KGMK.

(Increase)/decrease in metal inventories

Comparative effect of change in metal inventory amounted to -USD 187 million resulting in a decrease of cost of metal sales, primarily driven by accumulation of refined metals owing to coronavirus pandemic in 2020.

COST OF OTHER SALES

In 2020, cost of other sales decreased by USD 109 million to USD 575 million.

The effect of the Russian rouble depreciation was exacerbated by lower air transportation sales due to travel restrictions during the pandemic.

SELLING AND DISTRIBUTION EXPENSES

In 2020, selling and distribution expenses increased 23% (or USD 29 million) to USD 156 million primarily due to increase in transportation expenses (USD +18 million) and other expenses (USD +9 million) primarily due to the commissioning of production facilities at Bystrinsky project in September 2019.

SELLING AND DISTRIBUTION EXPENSES (USD MILLION)

Index	2020	2019	Change
Transportation expenses	71	53	34%
Marketing expenses	44	45	(2%)
Staff costs	18	15	20%
Other	23	14	64%
Total	156	127	23%

GENERAL AND ADMINISTRATIVE EXPENSES

In 2020, general and administrative expenses decreased 7% (or USD 69 million) to USD 869 million. Positive effect of the Russian rouble depreciation amounted to -USD 90 million. Changes of the general and administrative expenses in real terms were primarily driven by the following:

- USD 12 million – decrease in staff costs mainly due to decrease of one-off payments related to management bonuses, which was partly compensated by salaries indexation;
- +USD 28 million – increase of third party services primarily related to information security.

GENERAL AND ADMINISTRATIVE EXPENSES (USD MILLION)

Index	2020	2019	Change,%
Staff costs	529	601	(12%)
Third party services	134	117	15%
Taxes other than mineral extraction tax and income tax	69	77	(10%)
Depreciation and amortisation	67	69	(3%)
Transportation expenses	18	15	20%
Rent expenses	2	5	(60%)
Other	50	54	(7%)
Total	869	938	(7%)

OTHER OPERATING (EXPENSES)/INCOME

In 2020, other operating expenses increased by USD 2,434 million to USD 2,737 million driven by the following factors:

- +USD 2,241 million – primarily the environmental provision related to the liquidation of diesel fuel leak at the industrial site of the Heat and Power Plant N° 3 of Norilsk and compensation for environmental damage;
- +USD 192 million - cease of recognition of net income earned during the pre-commissioning stage generated by GRK "Bystrinskoye" owing to the full commissioning of Bystrinsky project in September 2019;
- +USD 276 million - increase in social expenses including coronavirus relief packages provided to the regions of the Company's operations;
- USD 200 million - change in provision on production facilities shut down at the Kola GMK.

OTHER OPERATING (EXPENSES)/INCOME, NET (USD MILLION)

Index	2020	2019	Change,%
Environmental provisions	2,242	1	100%
Social expenses	500	224	2x
Change in other provisions	24	39	(38%)
Change in provision on production facilities shut down	(10)	190	n.a
Net income earned during the pre-commissioning stage	–	(192)	(100%)
Other, net	(19)	41	n.a
Total	2,737	303	9x

FINANCE COSTS

In 2020, finance costs, net increased three times and amounted to USD 879 million primarily due to a change in the fair value of cross-currency interest rate swaps y-o-y, caused by a comparative effect of depreciation of the Russian ruble against the US dollar in 2020 and its appreciation in 2019, and also due to a change in the fair value of other long-term and other current liabilities y-o-y, representing an obligation to exercise a put option in relation to transactions with the owners of non-controlling interests of Bystrinsky GOK.

The average value of total debt increased in 2020, while the effective interest rate of the Company's debt portfolio as of the end of 2020 (2.9% in USD¹) decreased, as compared to this as of the end of 2019 (4.3% in USD1) because of the following factors:

- Loose monetary policies of the Federal Reserve System of the USA and the Bank of Russia, which positively impacted the Company's debt obligations bearing floating interest rates and on the back of which a share of the Company's total debt tied to floating indicators, main of which were 1 Month Libor and Key rate of the Bank of Russia, increased from 38% to 54% for the period from December 31, 2019 to December 31, 2020;
- Refinancing of a syndicated loan facility, originally signed in December 2017, with a group of international banks in February 2020, which resulted in the reduction of the loan's interest rate to Libor+1.40% per annum and the increase of the loan's funding limit from USD 2,500 million to USD 4,150 million;
- Issuance of five-year USD 500 million Eurobonds at a coupon of 2.55% per annum in September 2020; and
- Redemption of USD 1 billion Eurobonds bearing a coupon of 5.55% per annum in October 2020 and early repayment of RUB 60 billion loan at an interest rate of 8.3% per annum in November 2020.

FINANCE COSTS, NET (USD MILLION)

Index	2020	2019	Change,%
Interest expense, net of amounts capitalised	364	340	7%
Changes in fair value of other long-term and other current liabilities	262	64	4x
Fair value (gain)/loss on the cross-currency interest rate swap	182	(199)	n.a.
Unwinding of discount on provisions and payables	61	84	(27%)
Interest expense on lease liabilities	12	12	0%
Other, net	(2)	5	n.a.
Total	879	306	3x

INCOME TAX EXPENSE

In 2020, income tax expense decreased 39% y-o-y to USD 945 million driven mostly by the decrease of profit before tax.

The effective income tax rate in 2020 of 20.6% was above the Russian statutory tax rate of 20%, which was primarily driven by recognition of non-deductible social expenses.

THE BREAKDOWN OF THE INCOME TAX EXPENSE (USD MILLION)

Index	2020	2019	Change,%
Current income tax expense	1,685	1,924	(12%)
Deferred tax (benefit)/expense	(740)	(366)	2x
Total	945	1,558	(39%)

¹ According to management accounts of the Company

THE BREAKDOWN OF THE CURRENT INCOME TAX EXPENSE BY TAX JURISDICTIONS (USD MILLION)

Index	2020	2019	Change,%
Russian Federation	1,648	1,883	(12%)
Finland	11	16	(31%)
Rest of the world	26	25	4%
Total	1,685	1,924	(12%)

EBITDA

In 2020, EBITDA decreased 3% (or -USD 272 million) to USD 7,651 million primarily owing to environmental provisions and additional expenses

related to the containment of COVID-19 pandemic, which was partly offset by higher metal revenue.

EBITDA (USD MILLION)

Index	2020	2019	Change,%
Operating profit	6,400	7,036	(9%)
Depreciation and amortisation	943	911	4%
Impairment of non-financial assets	308	(24)	n.a.
EBITDA	7,651	7,923	(3%)
EBITDA margin	49%	58%	(9 p. p.)

STATEMENT OF CASH FLOWS**CASH FLOWS** (USD MILLION)

Index	2020	2019	Change,%
Cash generated from operations before changes in working capital and income tax	10,254	8,226	25%
Movements in working capital	(662)	(307)	2x
Income tax paid	(1,304)	(1,910)	(32%)
Net cash generated from operating activities	8,288	6,009	38%
Capital expenditure	(1,760)	(1,324)	33%
Other investing activities	112	204	(45%)
Net cash used in investing activities	(1,648)	(1,120)	47%
Free cash flow	6,640	4,889	36%
Interest paid	(472)	(460)	3%
Other financing activities	(3,860)	(3,163)	22%
Net cash used in financing activities	(4,332)	(3,623)	20%
Effects of foreign exchange differences on balances of cash and cash equivalents	99	130	(24%)
Net increase in cash and cash equivalents	2,407	1,396	72%

In 2020, free cash flow increased 36% to USD 6.6 billion. Higher cash generated from operating activities was partly offset negatively by more cash used in investing activities.

In 2020, net cash generated from operating activities increased 38% to USD 8.3 billion primarily driven by higher metal revenue as well as the decrease in income tax payments due to lower taxable profit.

In 2020, net cash used in investing activities increased 47% (or USD 528 million) primarily driven by a 33% capital expenditures increase (or USD 436 million). In real terms, capital expenditures increased 51% as flagship investment projects entered active construction stage.

In 2020, CAPEX increased 33% (or USD 436 million) to USD 1.8 billion following higher investments in main

industrial sites of the Group – Polar Division and South cluster, including higher investments in mining projects and launch of the active phase of sulfur project. This was exacerbated by sustaining capital expenditures including capitalized repairs and purchase of equipment.

RECONCILIATION OF THE NET WORKING CAPITAL CHANGES BETWEEN THE BALANCE SHEET AND CASH FLOW STATEMENT (USD MILLION)

Index	2020	2019
Change of the net working capital in the balance sheet	273	(118)
Foreign exchange differences	(290)	112
Change in income tax payable	(359)	(26)
Change of long term components of working capital included in CFS	(95)	(158)
Other changes including reserves	(191)	(117)
Change of working capital per cash flow	(662)	(307)

CAPITAL INVESTMENTS BREAKDOWN BY PROJECT (USD MILLION)

Index	2020	2019	Change,%
Polar Division, including:	665	478	39%
Skalisty mine	109	58	88%
Taymirsky mine	97	67	45%
Komsomolsky mine	51	54	(6%)
Oktyabrsky mine	16	27	(41%)
Talnakh Concentrator	38	14	3x
Other Polar Division projects	354	258	37%
Kola MMC	155	221	(30%)
Sulfur project	154	24	6x
South cluster	114	76	50%
Chita (Bystrinsky) project	98	103	(5%)
Other operating projects	563	413	36%
Other non-operating projects	11	9	22%
Total	1,760	1,324	33%

DEBT AND LIQUIDITY MANAGEMENT

As of December 31, 2020, the Company's total debt slightly increased, as compared to this as of December 31, 2019, while the share of current loans and borrowings in the Company's total debt decreased from 11% as of December 31, 2019 to 0.12% as of December 31, 2020. The key factors behind significant reduction in the share of current loans and borrowings in the reporting period were redemption of USD 1 billion Eurobonds in October 2020, early repayment of RUB 60 billion loan in November 2020, and drawing of long-term funds totaling USD 1,565 million from a syndicated loan facility, funding

limit of which was increased in February 2020 from USD 2,500 million to USD 4,150 million. This effect was also reinforced with a long-term borrowing in the total amount of USD 500 million by way of issuing five-year Eurobonds in September 2020 maturing on September 2025.

The Company's net debt as of December 31, 2020 decreased 33%, as compared to this as of December 31, 2019 due to the increase in cash and cash equivalents by 86% (or +USD 2,407 million) during the reporting period. This is primarily due

to the increase in cash generated from operating activities which had a positive impact on Net debt / 12M EBITDA as of the end of 2020, that decreased by 0.3x compared to this as of December 31, 2019 and amounted to 0.6x.

As of December 31, 2020, all three international rating agencies Fitch, Moody's and S&P Global, and Russian rating agency "Expert RA" assigned investment grade credit rating to the Company.

DEBT AND LIQUIDITY (USD MILLION)

Index	As of 31 December 2020	As of 31 December 2019	Change, USD million	Change,%
Non-current loans and borrowings	9,622	8,533	1,089	13%
Current loans and borrowings	12	1,087	(1,075)	(99%)
Lease liabilities	262	224	38	17%
Total debt	9,896	9,844	52	1%
Cash and cash equivalents	5,191	2,784	2,407	86%
Net debt	4,705	7,060	(2,355)	(33%)
Net debt /12M EBITDA	0.6x	0.9x	(0.3x)	



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ECOLOGICAL
AGENDA

THE VISION OF A GREEN ARCTIC

//photo: The final point of the route of the "The Great Norilsk Expedition" on the lake Pyasino

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Nornickel is a leading industrial company in the Russian Arctic. The Company's tactical and strategic plans are linked to the region's development, but further activities require an in-depth study of the Arctic and reliable up-to-date scientific knowledge.

Vladimir Potanin

President, Chairman of the Management Board MMC Norilsk Nickel

Introduction

GREAT NORILSK EXPEDITION

In July 2020, Nornickel initiated the Great Norilsk Expedition. A group of scientists from 14 research institutes of the Siberian Branch of the Russian Academy of Sciences was to study in detail the environment of the Taimyr Peninsula and develop proposals and recommendations that would help implement the best nature conservation solutions for industrial companies operating in the Arctic region.

Nornickel is a leading industrial company in the Russian Arctic. The Company's tactical and strategic plans are linked to the region's development, but further activities require an in-depth study of the Arctic and reliable up-to-date scientific knowledge. This statement was made by Vladimir Potanin, Nornickel's President. Any development of northern territories requires an understanding of natural and anthropogenic changes in the natural environment and their impacts on geological and biological processes.

Nornickel and the Siberian Branch of the Russian Academy of Sciences organised the Great Norilsk Expedition to gather this research. The expedition included specialists in various disciplines from botany to petrochemicals from the leading scientific institutions of Novosibirsk, Yakutsk, Krasnoyarsk, Tomsk, Norilsk and Barnaul.

The expedition's priority was an objective and high-quality study producing reliable results.

The scientists were to determine the outline of the Norilsk CHPP-3 spill and the timeline of anthropogenic pollution of the Taimyr Peninsula, and identify changes in biocoenoses and permafrost. An extremely large scope of work to be done in the harsh arctic climate required that special care be given to designing the expedition schedule and route. Feedback from the participants suggests that this was a job well done. The studies requiring special conditions, such as absence of snow or ice cover, were scheduled for the most suitable periods. Zoologists, botanists and hydrobiologists were the first to start work, with geochronologists being the last in the field.

The best possible conditions were provided for the expedition participants. All expedition members working in the field were reliably provided with transport, fuel and proper equipment. About two thousand samples of water, soils, bottom sediments, and living organisms have been taken and supplemented with permafrost measurements. This was followed up by laboratory analysis of the samples.

A report with the expedition data was released towards the end of 2020. The scientists confirmed the unsatisfactory condition of terrestrial ecosystems near Norilsk, noting that it improves gradually further away from the city.

Hydrobiologists concluded that the microflora of Taimyr water bodies polluted with petroleum products had

adapted to the new conditions, enabling the self-purification of the water bodies by the microorganisms. The self-purification ability of the water bodies is also confirmed by studies of bottom sediments, bacteria and animals, as the presence of certain species in the samples proves that the rivers and lakes are not heavily polluted now.

The scientists have collected an herbarium of plants, mosses and lichens to get a better understanding of species present in the arctic flora. Minor reduction of biodiversity observed in some areas was not linked by the specialists to anthropogenic pollution. Elsewhere, vegetation was more diverse than expected. Abundance of mosses, which are sensitive to the environment quality, is another proof of low pollution.

The region's fauna was also not affected by anthropogenic influence. Its diversity was low, as expected, but no changes that could be caused by petroleum product pollution were identified in caught mammals.

The specialists also examined soil conditions to evaluate the current condition of permafrost. The study identified the most probable cause of the tank failure at CHPP-3: subsidence of its pile foundation due to underground thawing. An analysis of the complete body of collected data ruled out the hypothesis that large volumes of petroleum products had reached the Arctic Ocean.

Upon completion of a review of the expedition data, Nor Nickel and the Siberian Branch of the Russian Academy of Sciences designed

a long-term programme to eliminate the consequences of the petroleum product spill.

The Company intends to continue collaboration with institutions engaged in fundamental research. The results of this research will lay a foundation for a new approach to operations in the Arctic. One of its key features will be conformity to sustainability principles and active deployment of green technologies, which is especially important given the fragility of northern ecosystems.

The results of the Great Norilsk Expedition will be used to develop rules for business activities in the Arctic. Andrei Bougrov, Senior Vice President of Nor Nickel, said these rules might be formalised as relevant governmental regulations.

