

OPERATING PERFORMANCE

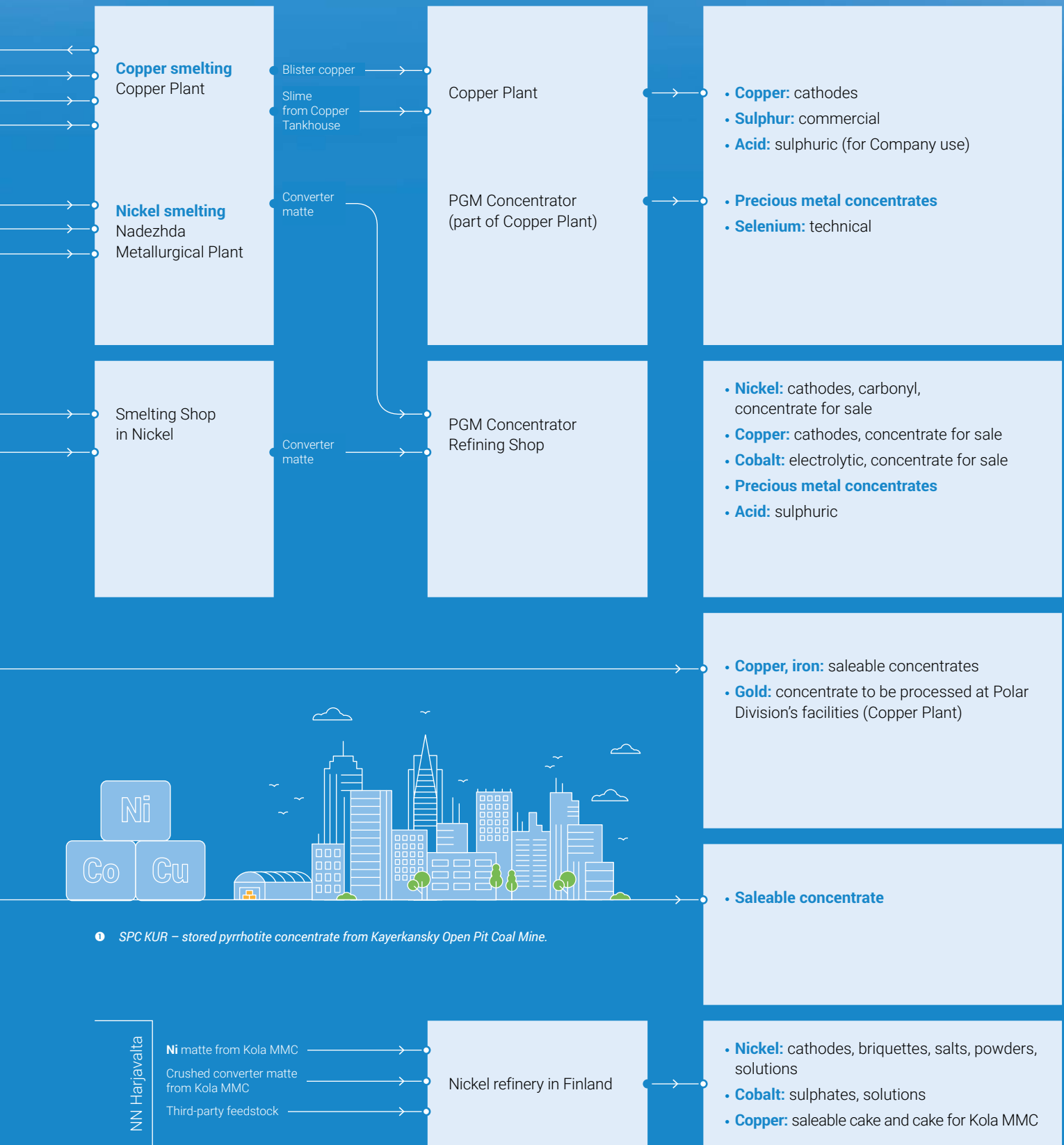


Production assets overview

SMELTING

REFINING

PRODUCT OFFERINGS





OPERATING PERFORMANCE FOR 2018



With the completion of our capacity reconfiguration, we fully met the production targets for 2018.

In 2018, the output of our key metals, primarily copper, was above the guidance thanks to increased processing of copper concentrate purchased from Rostec State Corporation and improved operating efficiency.

As we successfully reconfigured our production facilities, we were able to almost completely eliminate low-margin processing of third-party feedstock and increase output of nickel and copper produced from the Company's own Russian feedstock by 3% and 19%, respectively. Production of PGM from our own feedstock remained flat y-o-y, but was also above the guidance.

In 2018, Bystrinsky GOK came close to reaching its target parameters and is expected to yield some 40–46 kt of copper concentrate as early as in 2019.

2019 will see an active phase of the Kola MMC upgrade and higher copper output once Bystrinsky GOK hits its target capacity.

First Vice President – Chief Operating Officer
SERGEY DYACHENKO

Ore output (mt)

Asset	2016	2017	2018
Russia, including	24.8	25.0	25.2
Polar Division and Medvezhy Ruchey	17.2	17.4	17.3
Kola MMC	7.6	7.6	7.9
Bystrinsky GOK	0	0	7.9
Nkomati (South Africa)^①	2.8	3.5	3.1

Average metal content in ore mined

Asset	2016	2017	2018
NICKEL (%)			
Polar Division and Medvezhy Ruchey	1.2	1.3	1.3
Kola MMC	0.5	0.5	0.6
Nkomati (South Africa)	0.4	0.3	0.3
COPPER (%)			
Polar Division and Medvezhy Ruchey	2.1	2.2	2.2
Kola MMC	0.2	0.2	0.2
Nkomati (South Africa)	0.1	0.1	0.1
PGM (g/t)^②			
Polar Division and Medvezhy Ruchey	6.8	6.8	6.7
Kola MMC	0.1	0.1	0.1
Nkomati (South Africa)	n/a	n/a	n/a

Metals recovery in concentration (%)

Asset	2016	2017	2018
NICKEL			
Polar Division and Medvezhy Ruchey	77.1	79.9	81.5
Kola MMC	69.0	69.8	69.5
Nkomati (South Africa)	70.6	70.7	65.9
COPPER			
Polar Division and Medvezhy Ruchey	94.2	94.7	94.6
Kola MMC	73.6	75.4	74.1
Nkomati (South Africa)	89.5	90.9	88.4
PGM²			
Polar Division and Medvezhy Ruchey	77.7	81.5	82.7

Metals recovery in downstream (%)

Asset	2016	2017	2018
NICKEL			
Polar Division and Medvezhy Ruchey ³	93.4	93.9	94.6
Kola MMC ⁴	96.8	96.5	96.7
Kola MMC ⁵	98.0	98.2	98.0
Harjavalta ⁵	98.3	98.5	97.9
COPPER			
Polar Division and Medvezhy Ruchey ³	94.1	94.0	94.4
Kola MMC ⁴	96.6	96.2	96.1
Kola MMC ⁵	97.1	97.4	97.6
Harjavalta ⁵	99.7	99.7	99.7
PGM			
Polar Division and Medvezhy Ruchey ³	95.0	95.6	95.9
Kola MMC ⁵	93.4	96.7	94.0
Harjavalta ⁵	99.4	99.3	99.8

¹ Volumes based on the 50% ownership.

² The five following metals are included: palladium, platinum, rhodium, ruthenium and iridium.

³ Feedstock to end products.

⁴ Feedstock to converter matte.

⁵ In refining, converter matter to end products.

Saleable metals production across the Group

Metal	2016	2017	2018
GROUP TOTAL			
Nickel, kt	235.7	217.1	218.8
from own Russian feed	196.8	210.1	216.9
Copper, kt	360.2	401.1	473.7
from own Russian feed	344.5	397.8	473.5
Palladium, koz	2,618	2,780	2,729
from own Russian feed	2,526	2,728	2,729
Platinum, koz	644	670	653
from own Russian feed	610	650	653
RUSSIA			
Nickel, kt	182.1	157.4	158.0
Copper, kt	350.6	387.6	436.2
Palladium, koz	2,554	2,738	2,671
Platinum, koz	622	660	642
FINLAND			
Nickel, kt	53.7	59.7	60.8
Copper, kt	9.6	13.4	18.0
Palladium, koz	64	42	58
Platinum, koz	22	10	11
SOUTH AFRICA^①			
Nickel, kt	8.5	8.0	6.6
Copper, kt	4.1	4.5	3.1
Palladium, koz	40	46	33
Platinum, koz	15	20	13

① Saleable concentrate production based on the 50% ownership Nkomati's performance is reflected in financial results using proportional consolidation according to our stake and not reflected in other totals.

Metals production in 2018 – breakdown by asset (% from the overall Group production)

