

# 2021 Financial Results

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Presentation February 2022

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## **2021 Financial Performance Highlights**

Revenue \$ <b>17.9</b> bn up 15% vs 2020	<ul> <li>Higher realized prices</li> <li>Sale of Ni &amp; Pd from stock</li> <li>Re-sale of Cu purchased from 3<sup>d</sup> parties</li> <li>Scheduled reduction of output and temporary suspension of operations</li> </ul>	<ul> <li>FCF</li> <li>\$4.4 bn</li> <li>down -34% vs 2020</li> <li>Higher operating cash flow</li> <li>Cash reimbursement of environmental damages</li> <li>Higher CAPEX</li> </ul>
EBITDA \$10.5 bn up 37% vs 2020 \$1.1 bn GRK Bystrinskoe	<ul> <li>Revenue increase</li> <li>Environmental provision (most of which was booked in 2020)</li> <li>Introduction of export duties</li> <li>Increase in social expenses</li> <li>Domestic inflation</li> </ul>	<ul> <li>CAPEX</li> <li>\$2.8 bn</li> <li>up 57% vs 2020</li> <li>CAPEX</li> <li>Environmental (Sulphur programme in Norilsk) projects</li> <li>Strategic commercial projects</li> <li>Equipment purchases and capital repairs to improve industrial safety</li> </ul>
EBITDA Margin 59% up 10 p.p. vs 2020	<ul> <li>Leading positon among global diversified mining majors</li> </ul>	<ul> <li>ND/EBITDA</li> <li>0.5</li> <li>down 24% vs Dec'31 2020</li> <li>Leverage maintained at below mid-cycle level</li> <li>Investment grade credit ratings reiterated by all major international agencies</li> </ul>
NWC \$ <b>1.3</b> bn up 78% vs Dec <sup>31</sup> 2020	<ul> <li>Income tax receivable</li> <li>Increase of metal inventories</li> <li>Advances from customers</li> <li>Introduction of export duties</li> <li>Increase in payables for CAPEX</li> </ul>	<ul> <li>Cash Returns</li> <li>\$4.3 bn</li> <li>✓ Final 2020 dividend of USD 13,89 per share <sup>(1)</sup> paid in June 2021 for a total of UDS 2.2 bn billion</li> <li>✓ USD 2.1 billion share buy-back completed in June 2021</li> </ul>



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## Sustainable Development Update

Andrey Bugrov Senior Vice-President, Sustainable Development

Sergey Stepanov Senior Vice-President, Chief Operating Officer



## **Health and Safety Update**



#### **Over 90% of major and fatal accidents occurred:**

#### While performing the following types of work...

- Mining operations and were caused by a fall of rock or collision with a mine transport
- Maintenance and repairs, when working at height or with electrical equipment/infrastructure without proper isolation, doing hoisting operations or operating moving/rotating equipment

#### ... or because of unsatisfactory technical condition of:

- Buildings and structures, overpasses and service areas
- Regrettably, there were 11 fatal accidents in 2021 (+22% y-o-y), including the group accident at Norilsk Concentrator with 3 casualties, number of lost time injuries increased from 22 to 42 (+91% y-o-y)
- All accidents have been thoroughly investigated and reported to the Board, action plans to tackle causes of each incident prepared
- · Zero tolerance towards fatal incidents and violation of cardinal safety rules reiterated
- A comprehensive review of industrial safety requirements and standards is scheduled for 2022



## **Reduction of Fatal Accidents** is the Main Focus for 2022 - 2025

#### **Key Health and Safety Initiatives**



#### **Mining operations**

- Setting up a management expert group with the sole purpose to assess and raise safety standards in mining operations
- Enhance safety culture: improve management commitment and staff involvement in industrial safety activities (safety culture sessions, training of line management to develop safety competency)
- Strengthen risk-based approach to work activities
- Improve collision avoidance system for mining transport
- Use of modern training facilities, including underground polygon, simulators for operators of LHD machines, drillers and roof bolters
- Expand dispatching and digitalization of operations

#### Maintenance and repairs

- Rollout intelligent video analytics and positioning system
- Provide modern training sites to develop safe practical skills when working at height
- Renovate staircases, technological platforms and in-shop flyovers







## **Environmental Program: Reduction of SO<sub>2</sub> Emissions on Track**

## Norilsk Division: SO<sub>2</sub> Emissions Decreased 14% in 2021, Sulphur Program is on Track



## Kola Division: SO<sub>2</sub> Emissions Reduced 78% y-o-y in 2021 and 90% from 2015 Ahead of Targets

SO<sub>2</sub> Emissions [kt]



## Strategic target: achieve industry-leading SO<sub>2</sub> utilization rates

#### Norilsk Division:

- In 2021, a 14% decrease in SO<sub>2</sub> emissions was mostly driven by temporary suspension of mining and concentration operations
- Since the closure of Nickel Plant in 2016, SO\_2 emissions within the boundaries of the city of Norilsk have been down 30-35%
- Phase-1 of the Sulphur Program in Norilsk: construction of sulphur capture and neutralization line at Nadezhda smelter is in progress, due for completion by the end of 2022

#### Kola Division:

- In 2021,  $SO_2$  emissions decreased by 78% y-o-y as all smelting and refining facilities have been shut down as scheduled
- Hazardous emissions into the atmosphere at the Russia's Norwegian border have been completely eliminated
- The captive heat and power plant is scheduled for an upgrade, which should result in a further reduction of SO<sub>2</sub> emissions after 2024



## **Monitoring of the Air Quality in Norilsk**



## Installation of air quality sensors in the residential areas

- **Target:** provide real-time air pollution information for the local residents (via mobile apps and other)
- Roll-out: In 2021, a test trial of 16 sensors located in the city of Norilsk, and neighboring settlements of Oganer, Talnakh and Kayerkan was launched
- **Time-line:** In 2022, the data will be made available for the residents of the Norilsk Industrial District

## Installation of air quality sensors on the industrial sites

- Target: air quality control as part of the national Ecology project
- **Roll-out:** Norilsk Division plants are participating in a pilot program; a design of an automated monitoring system for the corporate industrial sites was launched in 2021
- **Time-line:** Completion of the pilot program at Nadezhda Metallurgical Plant is scheduled by the year-end 2022



## Climate Change: Industry's Lowest Carbon Footprint in Terms of Scope 1,2&3 Emissions and per Tonne of Ni Equivalent



Source: Wood Mackenzie, Company's estimates, Company's analysis, peer group include leading diversified peers BHP Billiton, Rio Tinto, Vale, Glencore, Anglo American. Most recent available data (2019-2020). Notes: 1. Assessment under GHG Protocol Corporate Accounting and Reporting Standards. Nornickel GHG emissions include amount of emissions that come from providing Norilsk with electricity by NTEK, and reserve for CO2 emissions from Sulphur Programme 2.0 execution, 2. For Nornickel incl. only downstream part of the supply chain, for peers including downstream and upstream, 3. Nornickel figure includes reserve for CO2 emissions from Sulphur Programme 2.0 execution



# **Climate Change Strategy: Reducing Absolute Emissions and Carbon Intensity**



Source: Company's analysis. Note: 1. Incl. OGK-3, 2. Incl. reserve for CO<sub>2</sub> emissions from Sulphur Programme 2.0 execution, 3. Ni equivalent volume has been calculated assuming 2020 average commodity prices, incl. reserve for CO<sub>2</sub> emissions from Sulphur Programme 2.0 execution, excluding residential consumption.

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## Selected CO2 Reduction Initiatives (1.9mt Reduction Program)

Reduction of Energy Losses	<ul> <li>Reconstruction of power transmission lines</li> <li>Upgrade of heat transmission pipes</li> <li>Large-scale upgrade of energy equipment</li> </ul>	
Improvement of Energy Efficiency	<ul> <li>Replacement on turbines at hydro plants and power generating units at Heat and Power Stations in Norilsk Division</li> <li>Reduction in power consumption for compressor air production</li> <li>Rollout of energy management systems</li> <li>Replacement of a coal-fired unit with an electric boiler at Kola Division</li> </ul>	
CO2 Abatement	<ul> <li><u>Construction of a dual-fuel diesel-LNG icebreaker to escort</u> <u>ships carrying Nornickel's cargo along the Northern Sea Route</u></li> <li>Upgrade of Chita project dump trucks to LNG fuel</li> <li>Other initiatives</li> </ul>	



## **Physical Risks: Monitoring of Permafrost-Based Foundations in Norilsk**



In 2020, satellite monitoring of permafrost-based structures launched in 4 priority areas: Norilsk, Dudinka, Snezhnogorsk and Svetlogorsk



### In 2021, a new permafrost-based foundations monitoring system was launched:

- Monitoring is carried out with the help of boreholes (with thermistor chains or water pressure sensors), incline detectors, humidity, ground temperature and water sensors as well as some others
- Program target: 1,500 of assets, including tanks, pipelines, production facilities and administrative buildings, to be equipped with real-time sensors, which will be plugged into the IDS system
- The Monitoring Center of Buildings and Structures of Norilsk Division, which carries out geotechnical monitoring and technical inspections, has been upgraded, staff expanded

#### Monitoring center launched in December 2021



#### Phased roll out of permafrost-based foundations monitoring system in Norilsk Industrial District

Phase 1	Phase 2	Phase 3	Phase 4
<ul> <li>Total of 165 facilities, incl fuel storage facilities and other buildings hosting large groups of people or cultural heritage buildings</li> <li>Completed in '21</li> </ul>	<ul> <li>55 facilities of Norilsk Fuel and Energy Company (NTEK), 5 tailing dams and ponds of Norilsk Division</li> <li>Due for completion by '24</li> </ul>	<ul> <li>Buildings and structures of Norilsk Division, including main mining and processing facilities</li> <li>Long structures such as various pipelines (including pulp, gas and others) and railroad infrastructure as well as 39 bridges</li> </ul>	<ul> <li>All remaining facilities located in Norilsk Industrial area, including overpasses, pipelines and power lines</li> </ul>



## **Climate Change: Comprehensive Physical Risk Mitigation Programme – Energy Infrastructure**





## **Clean-up and Collection of Legacy Waste in Norilsk Area**

## Clean-up and removal of legacy waste in Norilsk area

#### 2020 Launch:

- A dedicated Work with Territories and Landscaping Department was created within Norilsk Division: 890 employees and 121 units of specialized machinery and equipment
- Target: demolition of old abandoned buildings and structures, pipelines, utility lines and networks, and the removal of scrap metal accumulated around industrial sites within the city of Norilsk and its neighboring area

#### 2021 Results:

- Land area cleaned up of waste and old equipment: 1 m m2
- Waste collected: 304 kt of waste and 39 kt of metal scrap
- Obsolete buildings and structures dismantled: 108 units

#### 2022 Targets:

- Land area cleaned up of waste and old equipment: 3.8 m m2
- Waste collected: 340 kt of waste and 65 kt of metal scrap
- Obsolete buildings and structures dismantled: 154 units

## \$0.6 bn expected spending over 2021-2030 <sup>(1)</sup>







## Social: Russian Industry Leadership in Social Investments



#### **Response to** Coronavirus

- 0 production shutdowns • due to COVID-19
- >70% share of vaccinated employees at the main production divisions (1)
- Support of regional healthcare infrastructure to fight COVID-19 continued
- Full support to employees
- Nº1 rated by Forbes Russia in terms of COVID-19 corporate spending

>USD 200 mln COVID-19 related spending in 2020-2021



#### **Supporting Local** Communities

- Construction of a hospital and educational facilities
- Launch of the Corporate Healthcare Centre: first center was launched in Norilsk in December 2021
- Development of new tourist clusters in the regions of operations
- World of New Opportunities program supporting local non-profit organizations

#### USD 1 bn

Total social spending, including charity in 2021



#### **Renovation Programme for** the City of Norilsk

- RUB120bn until 2035 fourparty agreement with the federal and regional governments on the renovation of the city of Norilsk housing and social infrastructure signed
- Social & economic development program for Norilsk city



#### **Engagement with Indigenous People**

- Support of indigenous people of Taymir Peninsula: first batch of 28 grants were awarded to tribal communities, NGOs and municipal and public institutions
- Support of indigenous people of the Murmansk region: a new agreement with Sami people signed

#### **RUB 81.3 bn**

Company's allocation towards the program by 2035

### RUB 2 bn

5-year agreement (2020 - 2025)



## **Social: Investing into Local Communities and Charity in 2021**



total social, charity and sponsorship spending, incl. \$0.5bn provision for the renovation of Norilsk until 2035

 $\sim 6\%$  of revenue

the highest ratio of social expenses/revenue in the Russian industry

#### **Breakup of Social Expenditures in 2021**

Charity

- Renovation of Norilsk until 2035
- Agreement with the Krasnoyark region
- Other social expenditures



#### Ayka Sports and Recreation Center Launched in Norilsk in 2020



#### **Supporting Local Communities**



Source: Company data

## The Renovation Programme for the City of Norilsk Residential and Social Infrastructure until 2035

#### Breakup of Expenditures (\$1.1bn until 2035)



#### Housing renovation:

• Dismantling of obsolete buildings, construction of multi- and low-rise residential buildings

#### **Utilities Upgrade:**

 Thermal stabilization of soils under residential buildings and social facilities, reconstruction of the sewage system, heating mains

#### Security:

 Developing digital technologies (Norilsk Smart City project), construction of fire station, creation of city video surveillance system

#### **Social Infrastructure Development:**

- Construction and overhaul of social infrastructure facilities (clinics, kindergartens, a sports center, Arctic Museum of Modern Art, tourism infrastructure and etc.)
- Landscaping (urban redevelopment of public spaces, improvement of areas adjacent to city parks and recreation centers)

#### **Citizens Resettlement:**

 Resettlement of families currently residing in Norilsk and Dudinka to other Russian regions with more favorable living conditions



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# Key Projects of the Renovation Programme for the City of Norilsk (1/2)



Construction of residential buildings (at Norilsk and Oganer)



**Construction of a hospital (at Talnakh)** 



Dismantling of obsolete buildings (at Norilsk and Oganer)



**Construction of** a new ice stadium



Reconstruction of the sewage system



Construction of a new swimming pool



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# Key Projects of the Renovation Programme for the City of Norilsk (2/2)



Construction of new kindergarden, school and lyceum



Construction of a new museum of modern art (MOMA)



Reconstruction of the Polar State university building



Landscaping (urban redevelopment of public spaces)



Construction of a new water intake on the Norilskaya river



Reconstruction of the concert hall



## ESG Ratings – on Par or Above Global Mining Industry Averages





- Reiterated as an index constituent in December 2021
- Overall ESG score 4.3/5 the top percentile of the global industry
- Industry average 2.2/5





- ESG score 43/100
- Industry average 34/100



## CDP

- Disclosure to CDP launched in 2020 and reiterated in December 2021
- Climate Change score "D" (M&M sector – "C")
- Water Security score "C" (M&M sector – "B-")

Indicates an improvement of a rating/ESG score since previous update

Source: agencies' data, Company estimate.

Note: 1. Less is better.

For more details on the Company ratings, please seehttps://www.nornickel.com/sustainability/esg-highlights/assessment/



## Markets Update

Anton Berlin

Vice President Sales and Distribution



## **Industry's Lowest Carbon Footprint** of the Entire Commodities Basket



## Independent verification and confirmation

- In-house developed methodology for the assessment of carbon footprint of the metals' basket
- The methodology has been verified and confirmed by the international expert company Sphera GMBH (ISO 14040, ISO 14044)
- Actual carbon emissions per unit of finished products have been confirmed and certified by EY (Ernst&Young)

Sources: Ni - Nickel institute, Sphera GMBH, report "Life Cycle Assessment of Nickel Products, 2017", Co - Cobalt Institute, 2015 <a href="https://www.cobaltinstitute.org/sustainability/life-cycle-assessment/">https://www.cobaltinstitute.org/sustainability/life-cycle-assessment/</a>, Cu - The International Copper Association, "Copper Environmental Profile, 2018", PGM – IPA (International Platinum Group Metals Association) & Sphera GMBH "Life Cycle Assessment of Global Platinum Group Metals Production", 2017



Note: 1. Excluding Bystrinskoye Mining Company, 2. Industry average per kg of product (not applicable for direct comparison according to clause 6.2 of ISO 14044)

## **Metal Markets: Outlook on Medium-Term Fundamentals**



Source: Company estimates. Figures may not sum up due to rounding. Notes: 1. Excluding investments 2. In days of consumption

## **Nickel: Currently Tight Physical Market**

#### Nickel Exchange Stocks: Down to 10 Days LME Nickel: Backwardation since August 2021 of Consumption, Back to 2008 Level [kt Ni] [USD/t Ni] I MF 3M-Cash ■LME ■SHFE 100 Contango 600 500 -100-200 400 -300 300 -400 200 -500 100 -600 Backwardation v 2000

- Exchange nickel stocks are running tight; share of LME cancelled warrants (metal not available for withdrawal) increased to 50%
- All regional premiums for nickel products are up 50-700% since the beginning of 2021
- SHFE/LME arbitrage window was mostly opened in 2H21, indicating robust demand in China and incentivizing transfer of nickel metal from LME to SHFE

![](_page_23_Picture_7.jpeg)

## **Stainless Steel (70% of Global Ni Demand):** Strong Growth of 2021 Expected to Continue in 2022E

![](_page_24_Figure_2.jpeg)

#### Global Stainless 300s 2022E Outlook: +9% y-o-y as China and Indonesia +2.5 Mt, Others +0.5 Mt

![](_page_24_Figure_4.jpeg)

Sources: Zljsteel, Eurofer, SMR, METI, TSIIA, ISSF, Company estimates

Notes: 1. 30 largest producers with 97% market share in 300 series production

2. 300 series stainless steel is the main type of Ni-containing steels with a nickel content of ~8-20%

![](_page_24_Picture_8.jpeg)

## **Batteries (15% of Global Ni Demand):** Strong Rebound in Global NEV Sales in 2021

![](_page_25_Figure_2.jpeg)

![](_page_25_Figure_3.jpeg)

**Production of Nickel-Containing Battery Materials:** 

Sources: SNE Research, Company estimates Notes: 1. BEV equivalent - HEV and PHEV are recalculated according to the relative battery capacity ratio: HEV 2KWh vs PHEV 12KWh vs BEV 55KWh

![](_page_25_Picture_6.jpeg)

## Nickel Supply: >600kt Addition in Low-Grade/High Carbon Supply, but Little in High-Grade/Low Carbon in 2021-2022

#### High-Grade Ni Supply: Practically Unchanged in 2021, Double-Digit Supply Growth Expected in 2022E on Operations' Recovery

![](_page_26_Figure_3.jpeg)

#### Low-Grade Ni Supply: +166kt Addition in 2021 Fell Short of Expectations, a Downside Risk to the Ambitious 500kt+ in 2022E

![](_page_26_Figure_5.jpeg)

- 2021: high-grade Ni production unchanged despite temporary suspension of operations in Russia, Canada and Australia
- 2022E: recovery of highgrade Ni supply alongside major expansion of Indonesian NPI, which again may fall short of expectations due to challenges with the commissioning of new capacities
- 2023E+: excessive NPI capacities are expected to be underutilized

![](_page_26_Picture_10.jpeg)

## Nickel Market Balance: Deficit in 2021, Mild Surplus in 2022

![](_page_27_Figure_2.jpeg)

#### Global Demand: Double-Digit Growth of 2021 Driven by Stainless Steel and Batteries to Sustain in 2022

![](_page_27_Figure_4.jpeg)

#### **Global Supply: Indonesian NPI, Ni Compounds from HPAL and Scrap Are Main Drivers of Supply Growth**

![](_page_27_Figure_6.jpeg)

Source: Company estimates

Notes: 1. Excluding Class 1 Ni dissolution in order to avoid double counting,

2. Including NPI-to-matte conversion for nickel sulphate production

## **Copper Market:** A Largely Balanced Market in 2021-2022

#### **Copper Consumption:** Expected to Increase 3% in 2022

![](_page_28_Figure_3.jpeg)

#### **Refined Copper Production:** Expected to Increase 2% in 2022

![](_page_28_Figure_5.jpeg)

#### Market Balance: A Small Deficit is Expected in 2022 (less than 1% of Global Consumption)

![](_page_28_Figure_7.jpeg)

- **Copper demand in 2022** is expected to grow by 3% on the back of further global economy recovery, rising investments in renewable energy and EVs
- Global mine production is expected to increase by 4% in 2022 due to new mines in DRC and Peru and expansion of existing projects, while **refined production** will lag behind at +2% due to processing bottlenecks
- In spite of supportive fundamentals, copper price will be at risk due to potential negative impacts from macro such as reduction of liquidity injection and increase in interest rates

![](_page_28_Picture_12.jpeg)

### PGMs: Complete Recovery of Automotive Market (82% of Global Pd and 36% Pt Demand) Is Deferred Until 2022+ Due to Chip Shortage

![](_page_29_Figure_2.jpeg)

**Global Auto Production: Chip Shortage to Push Back Recovery to Pre-Covid Volumes Beyond 2022** 

2021

![](_page_29_Picture_5.jpeg)

2022E

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## **Palladium Market: Structural Deficits Are Temporary Moderating Owing to Subdued Global Autos' Demand**

#### **Demand: Recovery of Autos Production** to Accelerate in 2022 after Slow 2021

![](_page_30_Figure_3.jpeg)

#### Supply: Modest Growth in 2021 Despite Nornickel's **Cuts Owing to Release of WIP in South Africa**

![](_page_30_Figure_5.jpeg)

#### Market Balance <sup>(1)</sup>: Relatively Small Deficits in '21-22 Due to Subdued Global Autos' Demand

![](_page_30_Figure_7.jpeg)

- 2022E palladium output: South African and Nornickel's production volumes are expected to recover as work-in-progress material stocks are getting depleted in the former, whereas operations in Russia have resumed full capacity after temporary shutdowns in '21. Recycling will resume its growth as a new cars' availability improves in 2H22.
- **2022E demand:** chip shortage expected to ease and thus to drive further recovery of cars production in 2H2022. Taking into account the industry lead time, OEMs are expected to start increasing metal purchases towards 2022.

Source: Company estimates Note: 1. Excluding ETF

![](_page_30_Picture_11.jpeg)

## Platinum Market: Structural Surpluses Expands in 2021-2022 as South Africa Is Increasing Refined Metal Supply

#### Demand: Strong Growth of 2021 Driven by Higher HDD Loadings in China and Other Industries Expected to Moderate in 2022

![](_page_31_Figure_3.jpeg)

#### Supply: Strong Recovery of 2021 Owing to Release of WIP and Higher Primary Supply from South Africa Expected to Moderate in 2022

![](_page_31_Figure_5.jpeg)

#### Market Balance <sup>(1)</sup>: Surplus to Widen in 2021-2022 Due to Temporary Growth of South African Supply [moz]

![](_page_31_Figure_7.jpeg)

- 2022E platinum supply: no material change expected as the previously accumulated stocks in South Africa were already processed in 2021, while increase in recycling will be subject to auto industry recovery.
- **2022E demand:** auto industry recovery as the supply of chip should improve will be negatively offset by the reducing diesel share in Europe, with some support provided from Pd substitution with Pt in auto catalysts.
- Jewellery and investment demand are not expected to grow significantly, although can be supported by higher inflation.

![](_page_31_Picture_12.jpeg)

## Metal Markets: Outlook on Long-Term Fundamentals

![](_page_32_Figure_2.jpeg)

Source: Company estimates. Figures may not sum up due to rounding.

Note: 1. Revenue estimate is based on production forecast from Nornickel Strategy Day Presentation Nov 2021,

LT consensus price forecast and CPI projections by the US Congressional Budget Office

![](_page_32_Picture_6.jpeg)

![](_page_33_Picture_0.jpeg)

## **Financial Update**

Sergey Malyshev Senior Vice-President, Chief Financial Officer

![](_page_33_Picture_3.jpeg)

## Metal Sales Volumes and Realized Prices

![](_page_34_Figure_2.jpeg)

#### **Base Metals Sales: Down due to Lower Production, Ni Partially Positively Offset by Sales from Stock**

#### PGM Sales: Sales of Pd from Own Feed Up on Sales from Stock [koz] Palladium (3) Platinum 2.696 2.695

8

2,656

2021

Resale of Nkomati

concentrate

Russian feed

Semi-products

(Russian feed)<sup>(2)</sup>

63

2,603

2020

714

684

2020

25

![](_page_34_Figure_5.jpeg)

#### **Realized Prices: Entire Metals Basket Up Strongly** on the Post-CoViD Recovery of Global Markets

![](_page_34_Figure_7.jpeg)

#### Note: 1. Includes ore concentrates, produced by GRK "Bystrinskoe" 2. Metal contained in semi-products, including nickel and copper matte 3. Excluding sales of metals purchased from third parties

![](_page_34_Picture_9.jpeg)

633

621

2021

5

## **Consolidated Metal Revenue**

#### **Consolidated Metal Revenue Up on Higher Metals' Prices and Metal Sales from Stock**

![](_page_35_Figure_3.jpeg)

#### **Geographical Breakdown of Sales: Back to Europe from Asia in 2021**

![](_page_35_Figure_5.jpeg)

- + Stronger nickel, copper, palladium, platinum and rhodium prices Increase in copper and rhodium production/sales volumes,
   + sales of nickel and palladium from stocks accumulated in 2020 due to the decline of demand
- Resale of copper & rhodium purchased on the market
- Lower sales volume due to the scheduled decline in production
- of base metals and temporary suspension of two mines and a concentrator in Norilsk Division <sup>(1)</sup>

- Europe remained the largest market, accounting for 53% of metal sales revenue
- Sales to Asia reduced to 27% of total in 2021 due to the high base effect of 2020, when copper sales there increased to take the benefit of high local premiums and low cost of logistics, and owing to lower nickel sales to China as local consumers were switching from high grade products to Indonesian NPI
- Domestic sales remained relatively minor at 5% of total

Note 1: Sales volume declined due to the scheduled decline in production of nickel and copper in 2021 and temporary suspension of Oktyabrsky and Taymirsky mines owing to the flooding caused by the inflow of underground water and Norilsk concentrator owing to an incident. Both mines and the concentrator have now returned to their full operating capacity.

![](_page_35_Picture_14.jpeg)

## **Impact from the Changes in Legislation in 2021 and 2022**

#### Impact from the Changes in Legislation on Nornickel's MET and Export Duties as % of Annual Revenue

![](_page_36_Figure_3.jpeg)

#### Changes in taxation in 2021:

- 3.5x increase in Mineral Extraction Tax (MET) effective from 1 January 2021
- Introduction of temporary (5M long) export duties of 15% of realized price on Ni and Cu effective from 1 August 2021

#### Changes in Taxation in 2022:

- Temporary export duties have been cancelled
- Norilsk Division: MET will be calculated as 6 % × mined ore x metal grades of Ni, Cu, Pd, Pt, Co and Au x metal prices x metal recovery (85%  $^{(2)}$ ), but not less than RUB 730 per ton × 3,5
- Kola and Chita Divisions: MET will be calculated as 8% of cash cost of ore mined x 3.5 (no change from 2021)
- According to the management estimates, subject to commodity prices net impact of changes in taxation in 2022E (new MET) vs 2021 (MET + Export duties) net neutral

#### Potential changes in taxation beyond 2023:

 Proposal to introduce progressive corporate income tax depending on the level of dividends vs capex has been deferred for further consultations

Source: Company data. Peer group includes global diversified mining companies (BHP, Rio Tinto, Vale, Glencore, Anglo American) Royalties and revenues estimated on the basis of 2020 annual reports.

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Note: 1. For illustration purpose assuming 2021 commodity prices, 2. Subject for the methodology to be approved by the Government

## **EBITDA** and **EBITDA** Margin

![](_page_37_Figure_2.jpeg)

2021 EBITDA: Stronger Prices and Lower Expenses on Environmental Provisions Partly Offset by Lower Sales Volumes, Changes in Legislation (Export Duties Introduced + Higher MET) and Social Expenses

![](_page_37_Figure_4.jpeg)

- + Realized metal prices(+USD3,854 mln)
- 2.1% depreciation of RUB against USD (+USD66 mln)
- Domestic inflation of 8.4% (-USD193 mln)
- Increase in mineral extraction tax (3.5x) in 2021 and temporary export duties (-USD745 mln)
- Provision for the reimbursement of environmental damages (most of which was booked in 2020) (+USD2,067 mln)
- Lower sales volumes due to the scheduled reduction of base metal output and temporary suspension of two mines and a concentrator in Norilsk Division (-USD2,004 mln)
- + Metals sales from stock (+USD450 mln)
- Higher social expenses primarily owing to a provision of USD514 mln for a new agreement with the government for the renovation of the city of Norilsk housing and infrastructure

## **Operating Cash Costs**

![](_page_38_Figure_2.jpeg)

![](_page_38_Figure_3.jpeg)

#### **Reported Cash Costs: Up on Higher Mineral Extraction Tax Rate and Export duties**

![](_page_38_Figure_5.jpeg)

#### 2021 Cash Costs Breakdown

[USD mln]

- Labour
- Materials and supplies
- Metals and semi-products
- Taxes
- Other

![](_page_38_Figure_13.jpeg)

#### Adjusted Cash Costs<sup>(1)</sup> Increased Ahead of Domestic CPI on Higher Labour Costs

![](_page_38_Figure_15.jpeg)

Note: 1. Cash costs on adjusted basis exclude purchases of external semi-products and refined metals, impact of changes in legislation (MET and temporary introduction of export duties for 5 months in 2021) and FX changes

![](_page_38_Picture_17.jpeg)

## **Net Working Capital** Changes in 2021

[USD mln]

![](_page_39_Figure_3.jpeg)

![](_page_39_Picture_4.jpeg)

## **Allocation** of Capital Investments

#### **CAPEX**<sup>(1)</sup> Breakdown by Projects

[USD mln]		2,764
■ Talnakh Enrichment Plant (TOF-3)		167
<ul> <li>Envionmental program (Sulphur programme in Norilsk)</li> </ul>	1,760	526 175
Mine development	38	62 304
Bystrinsky project (Chita)	273	316
South Cluster	98 114	214
Energy and Gas Infrastructure Modernization	219 157	
<ul> <li>Other commercial</li> <li>Other stav-in-business</li> </ul>	707	1,000
	2020	2021

![](_page_40_Figure_4.jpeg)

![](_page_40_Picture_6.jpeg)

## Free Cash Flow Decreased to USD 4.4bn

![](_page_41_Figure_2.jpeg)

![](_page_41_Picture_4.jpeg)

## **Balance Sheet Management**

![](_page_42_Figure_2.jpeg)

#### Liquidity and Debt Repayment Schedule (1)

![](_page_42_Figure_4.jpeg)

#### **Proactive Debt Management in 2021**

- In October, US\$500mm 5yr Eurobond issue was placed with 2.80% coupon at the historically lowest spread to benchmark
- Bilateral facilities totaling over US\$700mm were refinanced with the new tenors of 3-5 years and lower pricing
- 3 new committed revolving facilities were signed with a total amount of RUB105bn
- Undrawn committed loan facilities and cash cover all scheduled debt repayments for the next 3 years and 9 months
- Corporate investment grade credit ratings confirmed by all three major international rating agencies

![](_page_42_Figure_11.jpeg)

### In October, US\$500mm 5yr Euro

![](_page_42_Picture_14.jpeg)

# Finance Costs Reduced to Record Low Levels

![](_page_43_Figure_2.jpeg)

#### Average Cost of Debt Reduced Ahead of Libor [%] average cost of credit portfolio (2) 4.6% 4.7% 4.3% 5.1% 2.9% 2.8% [% LIBOR 1M] **(**2.3pp) 1.6% 1.8% at the end of the period 0.8% 2.5% 0.2% 0.1% n **(**0.7pp) 2016 2017 2018 2019 2020 2021

#### Average Cost of Debt Reduced...

- ...by 2.3p.p. by the end of 2021 from YE2016
- ...well ahead of 0.7p.p. reduction of base interest rates (LIBOR) over the same period
- ...despite an increase in the average gross debt
- ...owing to proactive debt management and improvement of lending terms with our main debt providers
- ...while balance sheet FX position has been maintained neutral

![](_page_43_Figure_10.jpeg)

#### **Cash Finance Costs Declined to a Record Low**

[USD mln]

Note: 1. In 2016-2018, gross and net debt includes only financial lease liabilities, starting from 2019 it additionally includes other lease liabilities recognized under IAS 16 2. The metric presented is based on all-in effective interest rate including all cost components of debt instruments (without lease liabilities) as at the end of the relevant period (debt instruments denominated in currencies other than the US dollar are swapped for US dollar funding positions)

![](_page_43_Picture_14.jpeg)

## **Financial Results Sensitivity** to USD/RUB Exchange Rate

#### At USD/RUB rate of 74.3, 1% change in exchange rate translates into EBITDA change of USD56.3 mln, FCF change of USD112.1 mln

![](_page_44_Figure_3.jpeg)

![](_page_44_Figure_4.jpeg)

![](_page_44_Figure_5.jpeg)

![](_page_44_Figure_6.jpeg)

![](_page_44_Picture_8.jpeg)

![](_page_45_Picture_0.jpeg)

## Operations and Strategy Update

Sergey Dubovitskiy Senior Vice-President, Strategy, Strategic Projects, Logistics & Procurement

Sergey Stepanov Senior Vice-President, Chief Operating Officer

![](_page_45_Picture_4.jpeg)

## **Recovery of Oktyabrsky and Taimyrsky Mines and Norilsk Concentrator – Full Capacity Resumed**

#### Mines

- On February 24<sup>th</sup>, the two underground mines of Norilsk Division: Oktyabrsky (5 mtpa), mining rich, cuprous and disseminated ores, and Taimyrsky (4.3 mtpa), mining rich ores, were temporary suspended due to the increased inflow of natural groundwater
- Estimate of 2021E production losses: 30 kt of Ni, 55 kt of Cu and 470 koz of Pd+Pt
- Recovery to full capacity: the Oktyabrsky mine May 13<sup>th</sup>, the Taimvrsky mine – the beginning of December

#### **Risk mitigation – upgrade of** hydrogeological risk monitoring system

- Additional drilling and seismic exploration for a more accurate determination of the location of underground water bodies
- Areas at risk of large water inflows have been localized

#### **Norilsk Concentrator**

- Norilsk Concentrator (9.2 mtpa) includes disseminated (5.2 mtpa) and cuprous ore (4.0 mtpa) circuits, which process disseminated ore mined at the "South Cluster" and cuprous ore from Talnakh deposit, respectively
- On February 20th, the building of the ore reloading facility of secondary crushing unit, part of the disseminated ore circuit, collapsed during repairs causing 3 fatalities among the repairing team
- Norilsk Concentrator restored its full operational capacity
- Construction of a new concentrator to replace outdated facilities and further expand concentrating capacities to support growth plans is considered as a strategic option

#### **Risk mitigation**

- Zero tolerance for violations of industrial safety reiterated
- Capital repair risks being re-assessed and additional corrective industrial safety measures developed
- Changes to the technical audit system introduced: the reporting line of integrity engineers raised to the first deputy Head of Norilsk division, critical repair reports escalated to the Head of the division
- Ad hoc inspections launched focusing on the defects
- Complete revamp of the Concentrator is currently studied

![](_page_46_Picture_21.jpeg)

## "South Cluster": Ramping-up

- Large-scale (156+ Mt of disseminated ore <sup>(1)</sup>), long life (25+ years) brownfield asset at the bottom of the global PGM cost curve
- FS, detailed engineering and contractors selection tenders completed in 2021
- Expansion of open-pit ore mining to commence in Q1 2022

![](_page_47_Figure_4.jpeg)

Target Annual Capacity by 2027-2028				
Ore	Mt	9		
PGMs	Koz	750-850		
Ni	Kt	13+		
Cu	Kt	20+		

![](_page_47_Picture_7.jpeg)

## **Production Guidance** for 2021-2024 (1)

![](_page_48_Figure_2.jpeg)

- 2021 production volumes were impacted negatively by the temporary suspension of two underground mines at Norilsk Division as a result of their flooding and Norilsk Concentrator after an industrial incident in 1H 2021
- Both mines and the Concentrator have recovered and currently are operating at their full capacity
- In 2022-2023, Ni and PGM volumes will be affected by the planned furnaces maintenance at Nadezhda Smelter

Notes: 1. Metals produced from own feedstock (including metals in saleable semi-products), excluding production of Bystrinsky project and Nkomati

![](_page_48_Picture_7.jpeg)

## Sulphur Programme 2.0: **Environmental Roadmap**

![](_page_49_Figure_2.jpeg)

![](_page_49_Picture_4.jpeg)

## Sulphur Programme 2.0: Norilsk Division – Project Development Update

Nadezhda Smelter – neutralization workshops

![](_page_50_Picture_3.jpeg)

Unloading of a massive heat exchanger from the ship in Dudinka Seaport

![](_page_50_Picture_5.jpeg)

Sulphur gases mixing tower

![](_page_50_Picture_7.jpeg)

Installation of the largest part of one of the ball mills — a 28 tonnes drum

![](_page_50_Picture_9.jpeg)

![](_page_50_Picture_10.jpeg)

## **Production Flow and Key Projects Update**

![](_page_51_Figure_2.jpeg)

Source: Company data

![](_page_51_Picture_4.jpeg)

## **Expanded and Accelerated Energy Infrastructure Modernization**

#### Programme Expansion Rationale:

New energy and infrastructure projects have been added to secure accelerated replacement of obsolete equipment and ensure physical risk mitigation and long-term reliability

## Gas and Gas Condensate Upstream & Transportation

- Construction of new 70+ km gas and gas condensate pipeline (Pelyatkinskoye – Messoyakhskoye)
- Upgrade of 150+ km gas and condensate pipelines
- Ramp-up of gas wells drilling at Pelyatkinskoye field post 2028

#### Power Grid & Heat and Water Supply Networks

- Accelerated replacement of 110 kV and 220 kV power lines (over 1,000 km)
- Modernization of heat and water supply networks

![](_page_52_Figure_11.jpeg)

## **Contribution to Decarbonization & Energy Efficiency:**

Reinforced emphasis on higher productivity rates of the new power generating units at CHPPs and TPPs and comprehensive energy loss reduction across the entire energy value chain

#### **Combined Heat & Power Plants**

- Replacement of 2 power generating units at CHPP-2 and installation of 2 new power generating units at CHPP-3
- Potential construction of new power generating units at CHPP-1 and CHPP-3
- New equipment significantly more productive and fuel efficient, ensuring minimal energy losses

![](_page_52_Picture_18.jpeg)

4

- nyulo Powel Plaints
- Upgrade of all 7 hydro turbines at Ust-Khantay hydro power plant was completed. CO<sub>2</sub> savings to exceed 300 Ktpa
- Kureyskaya hydro power plant upgrade is scheduled for 2023-2030 targeting higher efficiency and installed capacity resulting in CO<sub>2</sub> emission reduction

![](_page_52_Picture_23.jpeg)

## **Expanded Investment Cycle**

![](_page_53_Figure_2.jpeg)

![](_page_53_Picture_4.jpeg)

![](_page_54_Picture_0.jpeg)

## Attachments

![](_page_54_Picture_2.jpeg)

## Nickel Exchange Stocks Declined in 2021 as the Market Temporarily Slipped into Deficit

#### **Exchange Inventories Plunged Due to Nickel Exchange Inventories Increasing Demand and Market Deficit Currently Stay Below Normal Level** [Days of consumption] [kt Ni] 92 265 6 0 37 107 0 92 15-25 (1) 14 (2) 6 Cu Ni Spot Ni Normal Ni Historical Nickel Hiah Oct-19 LME SHFE Dec-20 LME SHFE Dec-21 Spot Level Average 7-year low

![](_page_55_Picture_4.jpeg)

## Nickel Supply of Battery Grade Material: Risk of New NPI-to-Matte Conversion Not Meeting Expectations

#### NPI-to-Matte Conversion for non-Integrated Producers: Dependent on the Positive Netback between NPI and NiSO<sub>4</sub> Prices

[USD/t Ni]

![](_page_56_Figure_4.jpeg)

Nickel Sulphate Price less NPI price (LME basis)

- Cost of NPI-to-NiSO<sub>4</sub> conversion is estimated at ~\$4,000-5,000/t Ni
- The feasibility of NPI-to-matte conversion for nonintegrated (into NPI) producers is dependent on the spread between NPI and nickel sulphate prices exceeding the cost of conversion
- Downside risks for the ramp-up of NPI-to-matte conversion:
  - **Negative netback** between NPI and nickel sulphate prices (as was in 2H 2021)
  - Environmental restrictions in China, which may limit the launch of new conversion matte projects
  - Potential carbon footprint taxes

![](_page_56_Picture_12.jpeg)

#### Investment Demand (1% of Global Pd and 4% of Pt Demand) – PGM ETF Holdings Shows Mixed Results in 2021. 2022 Volumes May be Supported by Inflation Expectations

#### Palladium ETFs Holdings Increased by 44koz in 2021

![](_page_57_Figure_3.jpeg)

#### **Platinum ETFs Holdings** Decreased by 240koz in 2021 [koz] [\$/oz] US (LHS) EMEA (LHS) APAC (LHS) Price (RHS) 4,500 1400 4,000 1200 3,500 1000 3,000 800 2,500 2,000 600 1,500 400 1,000 200 500 0 0 Decilo warth weith seenth ward weith ward

![](_page_57_Picture_5.jpeg)

## **Global Decarbonisation** – **Risk Assessment for Nornickel's Metals**

		Ni	PGMs	Cu
Â	Growth of market share of BEVs			
R	Growth of hybrids		•	
j) J	Fuel cells	$\mathbf{O}$	•	$\mathbf{O}$
Ŧ	Growth of renewables/ low carbon fuel in power generation		0	•
	Storage and grid expansion to support growth of xEVs		$\triangleright$	•
NET I	МРАСТ		$\triangleright$	•

![](_page_58_Picture_4.jpeg)

## **Global Decarbonisation – Risk Assessment for Nornickel's Metals**

	👝 Gasoline	رتي Diesel	ゲーン Hybrid H incl. PHEV	EV 💭	
CAGR <sup>(1)</sup>	0%	0%	+24%	+36%	+43%
Market Share (2)	52%	11%	22%	14%	<1%
NI	Stainless St	Stainless Steel & Parts		teries	-
NI	2-4 kg	2-4 kg	5–15 kg	30–110 kg	2–3 kg
	Wires & Parts		+Electric Motor, Generator Winding, Charging Infrastructure		
	20-25 kg	20-25 kg	50-60 kg	75-85 kg <sup>(3)</sup>	70-75 kg
PCM		Catalysts		-	Fuel Cell
rum	2-5 g	3-6 g	4-10 g	-	25-35 g
Pt:Pd ratio	1:4	8:1	1:4	-	-
Metal value per vehicle, \$ <sup>(4)</sup>	\$410-1,020	\$340-610	\$770-1,610	Up to \$3,300	Up to \$2,000

Source: Company estimates, LMC Automotive, Bloomberg; Note: 1. CAGR for 2020-2025E, 2. Expected market share in 2025 based on production; 3. Excluding additional infrastructure demand of 1-8 kg per charger; 4. Metal values calculated at spot prices as of January 25, 2022

![](_page_59_Picture_4.jpeg)

## Metals Revenue: Negative Impact of Production Losses Have Been Well Offset by Higher Commodity Prices

#### Nickel Revenue: Up 15% on Higher Realized Price and Sales of Metal from Stocks Accumulated in 2020

![](_page_60_Figure_3.jpeg)

#### Palladium Revenue: Up 5% on Higher Prices and Sales of Metal from Stocks Accumulated in 2020

[USD mln]

![](_page_60_Figure_6.jpeg)

#### **Copper Revenue: Higher Prices Well Offset Production Losses and Build-up of Stock Effect**

[USD mln]

2020

![](_page_60_Figure_9.jpeg)

## Platinum Revenue: Up 10% on Higher Prices [USD mln] +10% 685 (70) (8)

Production

volume<sup>(1)</sup>

Realized

price

Note 1: Sales volume declined due to the scheduled decline in production of nickel and copper in 2021 and temporary suspension of Oktyabrsky and Taymirsky mines owing to the flooding caused by the inflow of underground water and Norilsk concentrator owing to an incident. Both mines and the concentrator have now returned to their full operating capacity.

#### NORNICKEL | 61

2021

Stock

change

## Sulphur Programme 2.0: Norilsk Division

#### Nadezhda Smelter: Flagship Project

Construction of furnace gases capturing, sulfuric acid neutralization line and supporting infrastructure:

- All key contracts signed
- Piling, steel works, gypsum storage dam raising in progress
- Project design allows for an expansion of the smelter's capacity (construction of a 3<sup>rd</sup> furnace)

#### **Copper Smelter**

Project aims to capture 99-99.5%+ of SO<sub>2</sub> (in line with global benchmarks) and includes construction of a new continuous converting unit and acid neutralization line:

- Phase 1: Gas cleaning unit reconstruction in progress
- Phase 2: Basic engineering / design completed
- FID taken in June 2021, construction to commence in 2022

		2023	202
Nadezhda Smelter	Phase 1		Phase 2
Copper Smelter	Phase 1		Phase 2

## CAPEX \$4.1-4.3 bn

NORNICKEL

## **Bystrinsky Update**

- One of the largest greenfield projects in the Russian mining industry
- 50.01% owned by Nornickel
- Ore reserves: 301 Mt @ Cu ~0.7%; Fe ~22.4%; Au ~0.84 g/t <sup>(1)</sup>
- Reserve life 31 years
- Target capacity achieved in 2Q 2020
- 2021 EBITDA: \$1 076 mln

#### **Operating Performance Outlook**

	- 2 A	2021	2022E	2023E
Ore <sup>(2)</sup>	Mt	10.5	10.5	10.5
Cu in conc.	Kt	68	64-68	61-65
Au in conc.	Koz	258	225-245	179-199

![](_page_62_Picture_9.jpeg)

Note: 1. According to the Russian classification (A+B+C1+C2), 2. Processed ore

### **Upgrade of Talnakh Concentrator: Phase-3**

#### **Project overview**

Major capacity expansion based on proven technology to process growing Talnakh ore volume and to unlock strategic optionality of the "South Cluster" development project

#### **Project update**

- Piling in progress
- All tender procedures for long-lead equipment items completed
- Tailings dam construction in progress

**Project timeline** Ramp-up: 2023-2024

+8 Mtpa

Additional capacity

![](_page_63_Picture_10.jpeg)

- Expected improvement in metal recoveries
- Expected annual EBITDA impact of additional \$150 mln

![](_page_63_Picture_13.jpeg)

![](_page_63_Picture_14.jpeg)

## **Expansion of Nadezhda Smelter: New 3rd Furnace**

#### **Project overview**

- Target: increase total throughput and provide a back-up capacity when either of two existing furnaces is shutdown for maintenance
- · Fits into the Nadezhda Smelter's existing production site
- New line to be fully integrated in Sulphur Programme 2.0 (gases to be captured and SO<sub>2</sub> neutralized)

#### **Project update**

- · Basic engineering / design solutions completed
- FID taken

#### **Project timeline**

Expected launch: 2025

## Up to **960** Ktpa

Additional throughput capacity

## + over 30%

Additional smelting of Ni concentrate

![](_page_64_Picture_14.jpeg)

## Harjavalta Nickel Refinery: Capacity Expansion

#### **Project overview**

- · Capacity expansion of high quality Ni product offering
- Leverage operational synergies from existing infrastructure

#### **Project rationale**

 Decision to increase capacity is driven by growing European market demand for battery raw materials responsibly produced, utilizing the Company's lowest carbon footprint in the industry

#### **Project timeline**

- 2023: Phase 1 (Total capacity 75k Ni)
- 2026: Phase 2 (Total capacity 100k+ Ni)

![](_page_65_Picture_9.jpeg)

Target capacity

![](_page_65_Picture_11.jpeg)

## New Norilsk Concentrator

#### **Project overview**

Construction of a new concentrator to replace outdated facilities and further expand concentrating capacities to support growth plans

#### **Project rationale**

- Complete renovation and expansion of processing capacity to process increasing feed from Norilsk Division
- Improve metal recovery rates
- Processing new mine feed from "South Cluster"

#### **Project timeline**

• Expected ramp-up: 2026-2027

![](_page_66_Picture_9.jpeg)

Target capacity

![](_page_66_Picture_11.jpeg)

![](_page_67_Picture_0.jpeg)

# Thank you for your attention!

![](_page_67_Picture_2.jpeg)