

# Success factors and KPIs



## CUSTOMER FOCUS



### Strategic goals

- Increase the share of value-added products
- Strengthen the domestic market share in construction products in Siberia
- Secure a 70% market share in the Russian rails market

### Overview 2017

- Improved customer relations and realised debottlenecking initiatives at operations, leading to respective increases of 6% and 106% in the sales volumes of rails and wheels in Russia
- Enhanced demand for beams in Russia, helping to boost the total market volume by 6% from 771 thousand tonnes in 2016 to 819 thousand tonnes in 2017
- Developed new export geographies and product types, including selling rails to five new countries and developing nine new types of wheels
- Increased export shipments of rebars by 29 thousand tonnes and semi-finished steel products by 20 thousand tonnes
- Achieved a combined EBITDA effect from these initiatives of US\$68 million

### Outlook 2018

- Increase domestic and export sales of wheels by further debottlenecking efforts and certifying new types of products
- Retain the strategy for beam sales unchanged, driven primarily by engineering solutions for construction projects, shipment and flexible payment terms, as well as by lead-time improvements at EVRAZ NTMK
- Double export sales of rails by developing new profiles and reducing logistics costs



### Strategic goals

- Supply 100% of the coking coal needed at EVRAZ' steel plants in all coal grades
- Increase market shares in Russia and Ukraine
- Establish an export price formula based on hard coking coal benchmarks

### Overview 2017

- Expanded export sales volumes by shipping to new destinations (Indonesia, Europe) and applying a better price formula, driving total overseas sales up 28% year-on-year to 4.8 million tonnes
- Began mining a new premium low-vol HCC coal grade, helping sales to reach 0.3 million tonnes
- Increased internal coal use at EVRAZ' steel plants to 50%

### Outlook 2018

- Increase sales in Russia and Ukraine
- Seek new export supply routes through ports on the Baltic Sea
- Further develop overseas client base to accommodate the growth in volumes



### Strategic goals

- Strengthen EVRAZ' leading positions in energy pipe markets for LDP in North America and OCTG in Western Canada
- Achieve a 40% market share in the rail segment
- Maintain a leading position in the West Coast plate market

### Overview 2017

- Experienced a surge in OCTG volumes due to the premium product mix and increased drilling volumes, driving the market share for OCTG in Western Canada to 28% and increasing sales volumes by 306% to 333 thousand tonnes
- Expanded the rail product portfolio to benefit from the market upside, doubled the welding business with a new technology and sold 366 thousand tonnes of rails in North America
- Ramped up EVRAZ Regina's LDP mill, which produced its first thick-walled (1-inch) pipe in the reporting period
- Achieved a combined EBITDA effect from these initiatives of US\$35 million

### Outlook 2018

- Upgrade the OCTG product portfolio through two projects: the heat treatment at EVRAZ Red Deer and the premium threading for seamless pipes at EVRAZ Pueblo
- Reach the targeted LDP volumes of 275 thousand tonnes at EVRAZ Regina due to participation in new pipeline projects
- Develop new high-value added products at EVRAZ Portland
- Asset development





## ASSET DEVELOPMENT



### Strategic goal

- Generate annual cost-reduction initiatives in the amount of 3% of the cost base at every business unit across the Steel segment

### Overview 2017

- Implemented a programme to reduce pig iron production costs
- Finalised most of the construction work for EVRAZ NTMK's blast furnace no. 7
- Implemented an energy efficiency programme, generating an EBITDA effect of US\$10 million
- Achieved a combined EBITDA effect from these initiatives of US\$78 million

### Outlook 2018

- Launch the blast furnace no. 7 and the new grinding ball mill at EVRAZ NTMK, as well as the boiler unit no. 9 at EVRAZ ZSMK
- Implement a programme to reduce steelmaking costs for BOF and EAF in the Urals and Siberia divisions
- Increase production volumes of finished steel and vanadium
- Perform capital repairs on EVRAZ NTMK's blast furnace no. 6



### Strategic goal

- Generate annual cost-reduction initiatives in the amount of 3% of the cost base
- Remain in the first quartile of the global cost curve
- Reach a saleable annual product volume of 22 million tonnes

### Overview 2017

- Improved degassing efficiency, tunnelling rates and operating time at longwall faces
- Launched open-pit mining at Raspadskaya-Koksovaya, producing 0.5 million tonnes of raw coal last year
- Launched commercial production at Mezhegeyugol, mining 0.9 million tonnes of raw coal last year
- Launched flotation at the third section of Raspadskaya's processing plant to increase concentrate output by 3%
- Achieved a combined EBITDA effect from these initiatives of US\$73 million

### Outlook 2018

- Increase coal mining volumes by 1 million tonnes through the ramp-up of operations at the Raspadskaya-Koksovaya open pit, the launch of the third longwall at the Raspadskaya mine and the introduction of additional equipment at the Raspadsky open pit
- Switch to low-ash seams and improve washing yields by 3–4%
- Use new flotation equipment at the first and second sections of Raspadskaya's processing plant



### Strategic goal

- Become the lowest-cost producer of rails, LDP, OCTG and plate products when delivered to the Western US and Canada

### Overview 2017

- Finalised EVRAZ Regina's steelmaking upgrade project
- Reduced conversion costs at EVRAZ Portland by US\$5/t
- Improved the rail production yield to 92%
- Achieved a combined EBITDA effect from these initiatives of US\$12 million

### Outlook 2018

- Realise the full-year savings at EVRAZ Regina due to the degasser working for the whole year
- Increase the production volumes for all product groups
- Focus on optimising electrode consumption and improving yields



For KPIs and detailed tracking, see page 27.

KPI

# Digital transformation

EVRAZ digital transformation strategically addresses customer focus and asset development success factors.



## Results in 2017

**19** projects were implemented

**16** projects are planned or being implemented

**11** projects are being considered



**CUSTOMER  
FOCUS**



**ASSET  
DEVELOPMENT**

## Key projects in 2017

### STEEL SEGMENT



#### **Machine learning** Optimise vanadium slag output in converter shop

EVRAZ NTMK  
Stage 1 completed in Q4 2017



Semi-product converter produces two commercial products, vanadium slag and steel semi-product. A computer-aided model developed using machine learning algorithms calculates optimal values for manufacturing process parameters (oxygen, coolant, additives) and recommends them for the converter operator to use.

#### **Implementation effect**

- Increased vanadium slag output
- Optimised oxygen and coolant use
- Improved technological process stability



#### **Industrial analysis and big data** Digital model of all steel production stages

EVRAZ ZSMK  
Duration: 2017 – 2018



#### **Project scope includes:**

- Integrated optimisation of material flows at each production stage from raw materials to semi-finished products
- Optimisation of production plans for each process stage
- Scenario comparison and sensitivity analysis for production and financial parameters

#### **Implementation effect**

Adequate model accuracy is reached for the first two phases (washing plant, sinter plant, coal preparation plant and coke plant).

### MINING ASSETS



#### **Advanced analysis and scenario modelling** Mine planning and scheduling

EVRAZ KGOK  
Duration: 2017 – 2018



An integrated geological suite enables mining professionals to:

- quantify and evaluate iron ore deposits;
- plan the efficient extraction of reserves;
- produce long-term and medium-term mining schedules that meet capacity and ore quality targets.

#### **Implementation effect**

- Higher and more stable Fe content
- Ore concentrate output increased by 2% year-on-year
- Ore consumption reduced by 1-2% year-on-year



#### **Remotely-controlled operations** Mine fleet management system

Razrez Raspadskiy  
Launched in 2017



The system makes it possible to manage Razrez Raspadskiy's mine fleet (dump trucks, excavators and bulldozers) and to monitor vehicle speed, dump truck loading and fuel consumption. The software helps the dispatcher to optimise the distribution of dump trucks among excavators and unloading points given current production plans.

#### **Implementation effect**

- Increased mine fleet productivity
- Reduced equipment downtime
- Reduced equipment wear and tear and fuel consumption

### SALES AND CORPORATE FUNCTIONS



#### **Integrated e-commerce** Online services for clients

EVRAZ Trading Company  
Launched in 2017



Online services are available for EVRAZ clients via a website optimised for PCs and mobile devices. An intuitive dashboard displays an overview of a client's operations, encompassing order management, financial statements, payments and shipments (including railway tracking).

#### **Implementation effect**

- Higher customer satisfaction and loyalty
- Labour costs generated by routine communications with a customer are reduced



#### **Lean and paperless back office** Robotic process automation

EvrazHolding  
Launched in 2017



Robotic process automation (RPA) is a technology that has emerged to simplify business process delivery and perform repetitive mundane tasks instead of office clerks. The pilot project executed for several back-office processes has proved the maturity of RPA software and its capability for the EVRAZ Shared Services Centre (ESSC).

#### **Conclusions derived from proof of concept**

- RPA is applicable for the majority (60%) of ESSC processes
- Roll-out roadmap is prepared: all ESSC processes can be robotised with 2-3 years