SUSTAINABILITY REPORT 2017

RUSAL

ALLOW FOR A BETTER FUTURE

WARNING

The information presented in this Sustainability Report only reflects the Company's position during the review period from 1 January 2017 to 31 December 2017 (the "Review Period") pursuant to the requirements of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Listing Rules") (unless otherwise specified). Accordingly, all forward-looking statements, analyses, reviews, commentaries and risks presented in this Sustainability Report (save for this Warning) are based upon the information of the Company covering the Reporting Period only and not thereafter.

Shareholders and potential investors should be aware that on 6 April 2018, the Office of Foreign Assets Control of the Department of the Treasury of the United States of America (the "U.S. Treasury") designated, amongst others, the Company to be added to its Specially Designated Nationals List (the "OFAC Sanctions").

A press statement issued by the U.S. Treasury in respect of the OFAC Sanctions on 6 April 2018 states that: "All assets subject to U.S. jurisdiction of the designated individuals and entities, and of any other entities blocked by operation of law as a result of their ownership by a sanctioned party, are frozen, and U.S. persons are generally prohibited from dealings with them. Additionally, non-U.S. persons could face sanctions for knowingly facilitating significant transactions for or on behalf of the individuals or entities blocked today."

Shareholders and potential investors should be aware that the information presented in this Sustainability Report (save for this Warning) does not take into account the OFAC Sanctions or any potential impact which the OFAC Sanctions may have on the Company or the Group. Accordingly, the information presented in this Sustainability Report (save for this Warning), including but not limited to all forward-looking statements, analyses, reviews, commentaries and risks, does not necessarily reflect the latest position (financial or otherwise) of the Group. Given the global nature of the business of the Group, the international politico-economic dimension of the OFAC Sanctions, and the potential cross-jurisdictional implications of the OFAC Sanctions, this matter is continually evolving.

Shareholders and potential investors should exercise extreme caution when making an assessment or dealing in the Shares. If in doubt, they are strongly advised to consult their stockbrokers, bank managers, solicitors and/or other professional advisers before dealing in the Shares.

TABLE OF CONTENTS

Dear friends!

I am pleased to present to you the UC RUSAL sustainability report for 2017.

We live in an era of rapid change, where new technologies transform day-to-day life and revolutionise the way whole industries operate. The fourth industrial revolution presents new opportunities for development across all industries whilst also exposing new challenges that need to be addressed. Leadership positions in the aluminum industry come with additional economic, environmental and social responsibilities, and RUSAL is working hard to adapt quickly to these changing conditions by developing relationships with customers, introducing modern technologies into the production line and improving management standards.

The principles of sustainable development underpin the Company's strategy and management decisions. We continue to invest in the environmental modernization of our plants, increase the level of production automatization and improve the safety of both the environment and the world's population. We strive to create materials which take into account the growing demand from our customers for products with a low carbon footprint and discover new high-tech applications for aluminum and alloys.

RUSAL is prepared for the new challenges as is reflected in 2017's updated strategy and the Company's stable financial performance and strong competitive position in the global markets. RUSAL is still the largest producer of primary aluminum outside of China, and one of the industry leaders in environmental performance.

Climate change remains an important issue for any industry involved in sustainable development. Today, for the aluminum industry, the creation and implementation of environmentally friendly technologies that support the transition to a low-carbon economy is key to survival. RUSAL already produces aluminum using renewable energy, with approximately 95% of electricity coming from hydroelectric power plants in Siberia and other non-carbon energy sources. In 2017, RUSAL introduced the brand of low-carbon aluminum ALLOW, which has a significantly lower carbon footprint than the industry average.

The Company also pays great attention to the social and economic development in the territories in which it has a presence, in Russia and abroad. In 2015, RUSAL built the Centre for Epidemic and Microbiological Research and Treatment (CEMRT) and assisted the Republic of Guinea to fight the spread of Ebola. In 2017, the Company established a unique scientific research laboratory complex to combat highly infectious diseases as part of CEMRT. During the reporting period, the same laboratory began the post-authorisation study of the Russian vaccine GamEvac-Combi to counter Ebola in the Republic of Guinea. We hope that the vaccine will take care of the Ebola virus in West Africa to become a thing of the past.

This year the Company initiated and supported projects aimed at improving the quality of life across all the countries and regions where our production is carries out. The report gives the description and analysis of these social projects.

The Company's most valuable assets are our professional and highly qualified employees. RUSAL is always looking to stimulate talent and the Company is focused on the professional and personal growth of its employees, as well as attracting new talent. We always get a lot of interest in working at RUSAL and the Company actively works alongside educational institutions in the field of training qualified personnel for the aluminum industry. The New Generation internship program for young specialists has seen great success and it is aimed at hiring and developing new personnel within the business.

On April 6, the US Office of Treasury included 14 Russian companies, including RUSAL, in the sanctions list. The difficulties that RUSAL faced in the spring of 2018 did not alter the Company's priorities or long-term strategy. We remain focused on all aspects of sustainable development in full compliance with current legislation and maintain full responsibility to our stakeholders.

This report has been prepared in accordance with the main version of the Sustainability Reporting Standards of the Global Reporting Initiative, and takes into account the requirements of the Hong Kong Stock Exchange's Environmental, Social and Governance Reporting Guidelines and Aluminum Stewardship Initiative standards. The report also includes information on the Company's contribution to the achievement of the UN's Sustainable Development Goals and on its compliance with the principles of the UN Global Compact.

Acting CEO of UC RUSAL
Evgenii Nikitin

1. ABOUT THE COMPANY

Profile

United Company RUSAL together with its subsidiaries ("**UC RUSAL**", "**RUSAL**", the "**Company**", the "**Group**") is one of the largest producers of primary aluminium and alloys in the world. In 2017, the Company accounted for about 5.8% of global production of aluminium and 6.3% of alumina production. The Company operates in 20 countries on five continents. RUSAL's production facilities are located mainly in Russia as well as in Armenia, Guyana, Guinea, Italy, Ireland and other countries. The main offices are located in Russia (Moscow) and Cyprus (Limassol). **GRI 102-1, 102-3, 102-4** The Company employs about 61,000 people. **GRI 102-8**

The business model of UC RUSAL is built on a vertically integrated production chain comprising deposits of bauxite and nepheline ore, alumina refineries, aluminium smelters, casting systems, foil rolling production facilities, and power generating facilities.

The Company comprises production facilities grouped into four divisions and two directorates. Producing and processing production facilities are located in Russia and abroad.[1] **GRI 102-7**

Aluminium	Alumina Division	Packaging Division	Energy Division	Engineering & Construction Division
• 9 aluminium smelters located mainly in Siberia. • 1 aluminium smelter in Sweden • 1 production facility producing wheel discs in Russia	• 4* alumina refineries 2 bauxite mines 1 nepheline mine in Russia • 5 alumina refineries in Ireland, in Ukraine, in Italy, In Guinea and Jamaica 3 bauxite mines in Jamaica, Guinea and Guyana	• 3 foil mills in Russia • 1 foil mill in Armenia	• The production facilities of the Energy Division form own source of power supply in Russia. • The main asset is the Boguchanskaya HPP	• 9 production facilities that provide construction, engineering and maintenance services in Russia

*/ The Company also holds a 20% equity stake in QAL, an alumina refinery located in Australia.

New Projects Directorate	Technical Directorate
• 3 powder production facilities 1 cryolite production facility 2 silicon production facilities 1 quartzite mine, other production facilities in Russia • 1 quartzite mine in Ukraine	• 4 production facilities of RUSAL's scientific-research complex in Russia.

Products

UC RUSAL produces a broad line of products, with almost half of them (50.8%) being high value-added products (aluminium sheet, ingots, wire rod, casting alloys, billets, etc.). The Company plans to increase the share of these products to 60% by 2021. The main products of the Company include primary aluminium, aluminium alloys, foil and alumina.

[1] Activities have been suspended at a number of production facilities, and they have the status of frozen production. Decisions regarding the resumption of their operation will be made as the strategy of the Company is implemented.

Main types of products **GRI 102-2**

Product type	Industry application	Description
Primary aluminium	Transport, construction, electrical and packaging industries	Primary aluminium is produced in accordance with quality standards and specifications developed at the request of the customers
High purity aluminium	Electronics, production of computer hard drives and condensation foil	UC RUSAL is the only producer of high purity aluminium in Russia and other Commonwealth of Independent States ("**CIS**") countries
Aluminium alloys	Transport, construction, electrical and packaging industries	UC RUSAL produces a wide range of high quality aluminium alloys
Foil and packaging	Food, pharmaceutical, construction, tobacco and perfume and cosmetics industries	The production facilities of UC RUSAL produce foil with a gauge of 5 to 240 μm and a number of products based on it, a range of tape - from 250 μm to 1 mm, as well as cans and covers for food packaging
Aluminium powder, paste and granules	Metallurgical, chemical, energy, mining and construction industries	UC RUSAL is the largest Russian producer of aluminium powder products
Wire rod	Cable production, iron and steel industry, production of hardware items	UC RUSAL produces the wire rod in accordance with the GOST and international specifications
Alumina and bauxite	Intermediate products, from which aluminium is made	High quality alumina is produced by the Bayer process
Silicon	Metallurgical, chemical, electrical, production of solar cells	UC RUSAL produces metallurgical and refined silicon. The product registered in the REACH system[2]
Gallium	The production of chemical compounds used in solar energy and electronics industry	UC RUSAL produces high purity metallurgical gallium
Corundum	Production of abrasive tools, ceramic and refractory products	UC RUSAL is one of the world's largest producers of white corundum
Protectors from aluminium alloys	Shipbuilding, oil and gas, housing and utility sector	The products are used for long-term protection against corrosion of metallic objects in aggressive environments (marine and bottom water, ground and reservoir waters)
Aluminium wheel discs	SKAD alloy wheels are installed on passenger cars	Discs are produced based on the latest technology and have passed an independent examination by TUV SUD Automotive GMBH, their use is allowed in the countries of Western Europe, USA and Russia

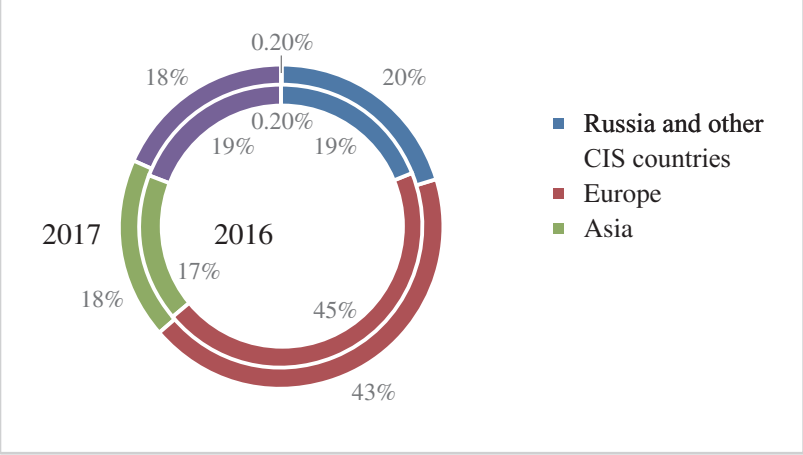
UC RUSAL supplies aluminium products to Europe, America, Southeast Asia, as well as the domestic market. The products are delivered to the customers by rail, road, river and maritime transport. **GRI 102-6**

[2] The European Union regulations governing the production and circulation of all chemical substances, including their compulsory registration

Means of transportation of the products

Products	Means of transportation
Aluminium in bundles and ingots	Rail transport (boxcars and combined cars, containers), trucks, river transport and maritime transport (vessels of 3.1 to 20.4 thousand tonnes of dead weight)
Aluminium in slabs and billets	Rail transport (gondola cars, combined cars, containers), trucks, river transport and maritime transport (vessels of 3.1 to 20.4 thousand tonnes of dead weight)
Alumina	Rail transport in specialised rolling stock (hopper cars, mineral hoppers, grain hoppers), gondola cars (including liners and big bags), combined cars, boxcars) and sea transport (vessels of 23 and 45 thousand tonnes of dead weight).

Geographic structure (volume), %



Presence in financial markets

The ordinary shares of UC RUSAL are included in the quotation lists of The Stock Exchange of Hong Kong Limited (the "**Hong Kong Stock Exchange**"), the Moscow Exchange, and the Euronext Paris trading in the form of Global Depository Shares until May 2018 ("**GDS**").

Shareholding structure

In 2017, the main shareholders of the Company were: En+, SUAL Partners, Amokenga Holdings and Onexim[3]. As at December 31, 2017, the number of shares of the Company in public hands amounted to 16.6% of the total 15,193,014,862 issued shares of the Company.[4] **GRI 102-5**

Participation in other companies

UC RUSAL holds 27.82% of the shares in Norilsk Nickel PJSC, the world's largest producer of nickel and palladium and one of the leading producers of platinum and copper.[5] UC RUSAL also holds 50% of the shares in the coal company Bogatyr Komir (Kazakhstan).

---

[3] Amokenga Holdings is solely controlled by Glencore International Plc.

[4] Read more about shareholders, beneficiaries of the Company and their share in the capital stock on the website https://rusal.ru/investors/to_shareholders/structure/and in the Annual Report 2017 by UC RUSAL.

[5] Source: *www.nornik.ru.*

2. CORPORATE GOVERNANCE

CORPORATE GOVERNANCE SYSTEM

Principles

High quality corporate governance leads to successful business development and increases the investment potential of the Company, providing more security for shareholders, partners and customers as well as reinforcing the Company's internal control system.

The UC RUSAL's corporate governance system is based on internationally recognised standards of corporate governance. The principles of organisation of corporate governance are enshrined in the Company's Articles of Association, the Code of Corporate Governance, the Code of Corporate ethics, as well as other internal documents governing the operation of the management and control bodies.

The Company is continually improving its corporate governance system by introducing best world practices and ensuring that the activity of the management bodies complies with the requirements of the listing of stock exchanges, where the Company's financial instruments are traded.

In 2010, the Code for Securities Transactions by Directors of the Company and its employees was adopted and developed on the basis of requirements of the Rules Governing the Listing of Securities on the Stock Exchange (the "**Listing Rules**").

*Please see more detailed information about the corporate governance system in the Annual Report of the Company ("**Annual Report**") for 2017.*

Management bodies GRI 102-18

General Shareholder Meeting

The General Shareholder Meeting is the highest management body, through which the shareholders are able to participate in the management of the Company and in the decision-making process on key issues of its operation.

Board of Directors

The board ("**Board**") of directors ("**Directors**") is collectively responsible for the management and activity of the Company, including the responsibility for approval and control of overall development strategies, annual budget, business plans and material investment plans for the Company; control and evaluation of the performance of the Company in terms of policies, budgets and plans; approval and supervision of management performance; formulating health, safety and environment strategy; evaluating and determining the risks related to health, safety and environment; maintaining the health, safety and environment management systems and internal control systems of the Company; reporting of the Company's operation to all parties, to whom the report is to be submitted in accordance with the established procedure and ensuring that the accounting records are consistent with the legal obligations of the Company. **GRI 102-26, HKEx Appendix 27 KPI para 8**

The roles of the chairman of the Board of Directors and the Chief Executive Officer of UC RUSAL are segregated and are independent from each other. The Chairman is responsible for ensuring the effective functioning of the Board of Directors. The functions of the Chief Executive Officer include the monitoring over the enforcement of strategic decisions adopted by the Board of Directors for the areas of production and sales, corporate management and finance, sales, marketing, etc., as well as the day-to-day management of the Company. **GRI 102-23**

During the year ended December 31, 2017, the Board of Directors consisted of 3 executive, 9 non-executive and 6 independent non-executive Directors (representing at least one third of the members of the Board of Directors as required under the Listing Rules). The current composition of the Board of Directors offers sufficient independent checks and balances and an appropriate governance structure for the Company. **GRI 102-22**

As at December 31, 2017, most of the committees (the Audit Committee, the Remuneration Committee, the Corporate Governance and Nomination Committee, the Standing Committee and the Norilsk Nickel Investment Advisory Committee) were headed by independent non-executive Directors. The Board of Directors believes that all independent non-executive Directors have appropriate and sufficient industrial or financial experience and qualifications to carry out their duties.

Due to the fact that the main shareholders of the Company are the companies that compete or can compete with UC RUSAL, and also have the right to initiate the appointment of their representatives on the Board of Directors of the Company, an analysis of the independence of the members of the Board of Directors and the Company's top management from the top management of the main shareholders is carried out to confirm that the Company can conduct its business on its own account and independently from the main shareholders. **GRI 102-25**

UC RUSAL recognises the importance and fully applies the principles of equality and diversity in the composition of the Board of Directors.

Selection of candidates takes into consideration a range of diversity perspectives, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service (the list of criteria can be extended). The ultimate decision is based on merit and contribution that the candidates have brought and will bring to the Board of Directors.

The existence of a wide range of opinions and individual experiences, regardless of gender, age and ethnicity, is a significant factor in the adoption of balanced decisions. The Company believes that the increasing diversity of the Board of Directors is an essential element in supporting its strategic objectives and achieving sustainable development. As at December 31, 2017, the Board of Directors was composed of 4 women and 14 men. Policy of the Board of Directors in relation to diversity is described in the Annual Report. The Corporate Governance and Nomination Committee conducts analysis and evaluation of the practical implementation of diversity principles. **GRI 102-24, 405-1**

***Committees of the Board of Directors** GRI 102-18, GRI 102-22*

The following main special purpose committees are operating under the Board of Directors: the Corporate Governance and Nomination Committee, the Remuneration Committee, the Audit Committee and the Norilsk Nickel Investment Advisory Committee, as well as the Marketing Committee and the Health, Safety and Environment Committee. The Committees, in accordance with their competence, are responsible for the preliminary consideration of the matters submitted to the Board of Directors and make recommendations. **HKEx Appendix 27 para 8**

The tasks of the *Health, Safety and Environment Committee* include reviewing the Company's policies in the Health, Safety and Environment related areas, assessing the Company's compliance with regulatory requirements and assumed commitments, and assessing risk and performance. **HKEx Appendix 27 para 9**

The functions of the *Corporate Governance and Nomination* Committee include, among other things, the development, provision of recommendations and the annual revision of the guidelines, policies and practices of corporate governance of the Company, overseeing the implementation of corporate governance issues, reviewing and monitoring the Company's policies and practices on compliance with legal and regulatory requirements, reviewing and monitoring the training and continuing professional development of the Directors and top management, as well as the development, review and monitoring compliance with the Company's Code of Ethics.

The Corporate Governance and Nomination Committee establishes the criteria applicable to the evaluation of the nominees to the Board of Directors, including: independence (in the case of selection of independent non-executive Directors), gender diversity, age, existing skills, experience and knowledge of the business of the Company and the industry, in which it operates, and the willingness to devote sufficient time and effort to performing their responsibilities as a member of the Board of Directors.

The primary functions of the *Remuneration Committee* are, among other things, to make recommendations to the Board on the remuneration package of the Directors and senior management, and to assist the Board in overseeing the administration of the Company's compensation and benefits plans. Remuneration policies are determined on the basis of an employee's qualifications and performance, as well as the complexity of his or her job.

The total remuneration, including the basic salary, performance-linked salary, incentive-linked salary and bonus of the Directors in 2017 amounted to approximately USD 19 million. **GRI 102-35**

The tasks of the *Audit Committee* are to provide the Board of Directors with an independent assessment of the effectiveness of the Company's financial statements, internal control and risk management systems and audit processes.

Please see more detailed information about the composition and activity of the committees of the Board of Directors in the Reporting Period in the Company's Annual Report; the regulations on the committees of the Board of Directors have been published on UC RUSAL website.

Performance evaluation and training

The Board of Directors conducts a self-assessment of performance on the annual basis. The results are reviewed by the Corporate Governance and Nomination Committee. In this way, positive developments and areas for further improvement are identified. **GRI 102-28**

Pursuant to the Corporate Governance Code, all directors must continually upgrade their professional knowledge and develop their skills. During the year ended December 31, 2017 (the "**Reporting Period**"), all directors received information about relevant industry issues and existing legislation. **GRI 102-27**

Executive bodies and senior management

The Board has delegated the day-to-day operation of the Company to executive Directors and the Executive Committee to ensure effectiveness and appropriateness of functions.

The primary task of the Executive Committee is to assist the Chief Executive Officer and senior management with the operational management and to assist the Board in implementing the strategy of the Company and monitoring its performance.

Additional functions and responsibilities of the Executive Committee include, but not limited to, the development of the Group's strategy for subsequent approval by the Board of Directors, as well as control and monitoring of financial performance and other matters. The Executive Committee is empowered to establish committees comprising of its members, as well as other managers from time to time. **GRI 102-19**

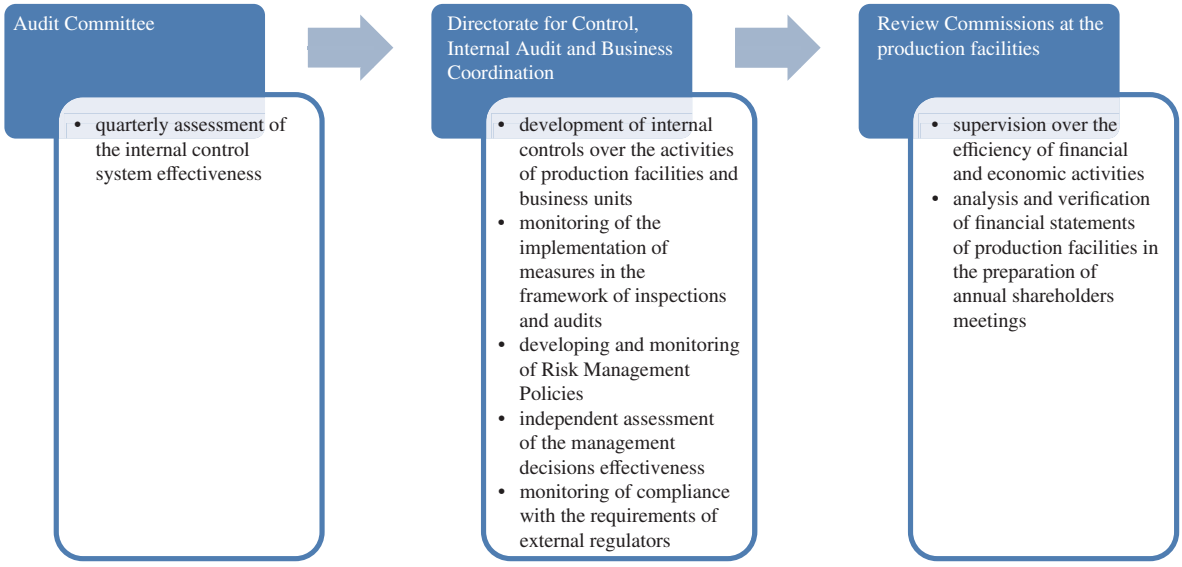
INTERNAL CONTROL

Internal Control System

Using advanced management standards and procedures the Company implements effective control and risk management systems. The internal control system is organised to protect assets, to improve business processes, to ensure that the Company's financial, economic and other activities comply with legislative requirements, and to maintain the control environment at an appropriate level. The internal control system aims to ensure compliance with:

- the requirements for public companies;
- the requirements of the shareholder agreement;
- the requirements of the Aluminium Facility Agreement ("**AFA**") regarding the compliance of operations with the legislative and regulatory acts of the various jurisdictions;
- labour and social policy requirements of the Company;
- environmental protection requirements, etc.

The main authorised bodies operating in these areas are the Directorate for Control, Internal Audit and Business Coordination (hereinafter the Directorate), the Audit Committee and the Review Commission.



Internal control is regulated by about 40 regulations, procedures and orders that are constantly updated:

- Regulations on reporting to the Board of Directors and the Executive Committee in special situations, and Regulations on emergency management;
- Risk Management Policy and Regulations of UC RUSAL;
- Table of corporate approvals;
- Regulation on assigning the authority to represent the interests of the UC members under the power of attorneys;
- Procedure for transactions with related parties/related parties using the automated transactions control system;
- The Company's policy on compliance with sanctions and embargoes;
- Regulation on audit of planned actions for compliance with antimonopoly requirements;
- Anti-Corruption Policy of the Company;
- Regulation on Securities Transactions by officials and employees of the Company;
- Policy on prevention of unfair actions;
- Policy on reporting violations and Regulations reporting violations in the selection of suppliers and contractors of the Company;
- Regulations on the protection of insider information and Provision on the commercial secrets;
- Information Security Management System Policy and Information Security Policy of UC RUSAL;

- Procedure for the password protection in the corporate information system and the Anti-Virus Protection Policy;
- UC RUSAL Environmental Policy;
- UC RUSAL HSE and fire safety system management;
- RUSAL's Code of Corporate Ethics;
- Provision on the functioning of the Corporate Ethics System and the Regulation on the Corporate Ethics Officer;
- Company's HR Policy;
- Provision on prevention and resolution of the conflict of interest;
- Provision on the procedure for the appointment to the management positions of the Company;
- Regulation "Customer Satisfaction Assessment and Improvement" and Standard "Analysis of Customer Requirements";
- UC RUSAL Technical Policy;
- Provision on the management of UC RUSAL development projects;
- UC RUSAL's Quality Policy and Quality Manual;
- Regulation for the Quality Certification of Producers of Raw Materials;
- Regulations on the management of the Company's property and the procedure for carrying out inventories at the Company's production facilities;
- Standard Internal Audits of Management Systems. Planning Organisation and Conducting Requirements;
- Standard: Organisation of Technical Visits and Audits. Requirements for the organisation of registration and monitoring of corrective actions following audits/visits;
- Regulations for planning and monitoring the implementation of recommendations based on the results of internal audits;
- Business Partner Code;
- Regulations on the Tender Committee and Regulations on the Bidding Committee;
- Procurement regulations;
- Regulation of UC RUSAL "Supplier Accreditation System", etc.

The Directorate constantly monitors the compliance of the Company's management with the policies, regulations and procedures established by internal documents, as well as recommendations submitted following the results of the inspections and audits.

In 2017, the following documents were introduced or updated:

- Regulation on the Execution, Performance, Recording and Keeping of Transactions;
- Methodology for overdue accounts receivable management;
- Provision on claim settlement;
- Procedure for making payments in the SAP R/3 system and Procedure for verifying and conducting payments of production facilities operating outside the SAP R/3 system;
- Cardinal Rules of Work Safety;
- Provision on the Creation and Development of a Candidate Pool of UC RUSAL;
- Guide to the environmental management system of UC RUSAL;
- Methodology for the determination of direct greenhouse gas emissions in the production of primary aluminium and Methods for determining direct greenhouse gas emissions in the production of alumina;
- Method for determining carbon footprint in production of primary aluminium and its alloys;
- Guidelines on Ranking of Suppliers of Raw and Other Materials;
- Regulation on the Product Safety Representative (PSB) etc.

The Directorate regularly makes reports to the Board of Directors, the Audit Committee and the Review Commission on the results of work, findings of the inspections, including inspections of the management bodies. **HKEx Appendix 27 para 9**

Based on the reports submitted to it, the Audit Committee assesses the effectiveness of the Company's internal audit system on a quarterly basis. Based on the findings of the inspection held at the end of the 2017, the Board of Directors confirmed that during the Reporting Period, internal control system operated in accordance with the requirements of the Corporate Governance Code.

Compliance

The Company pays great attention to improving the system of ensuring compliance with applicable laws, regulations, standards and other applicable requirements and to preventing their violation (compliance function). **GRI 102-16**

The main tasks of the compliance function include:

- development and implementation, as well as improvement of policies and procedures to comply with the applicable requirements;
- implementation of procedures and other necessary measures to prevent violations of applicable requirements;
- training in compliance;

- assisting the employees of the Company in fulfilling their obligations to comply with the applicable requirements;
- promotion and development of an appropriate compliance culture in the Company that ensures the ethical behaviour of employees and their commitment to the compliance with applicable requirements.

On December 2016, the Company appointed Global Compliance Officer.

In order to prevent conflicts of interest, the Company has an automated multi-level system of control of connected transactions[6] (in accordance with Listing Rules and International Financial Reporting Standards), internal regulations are developed and regularly updated, and responsible employees are trained.

The Company implements the plan of staff training in compliance approved by the Board of Directors.

Fight against corruption and fraud prevention

UC RUSAL makes every effort to prevent bribery of individuals or state officials; the Company does not take part in any forms of unethical rewards or payments. The Company has approved an Anti-Corruption Policy. **GRI 205-2**

The Company has applied policies that strengthen the ban on corruption and bribery, extortion, fraud and money laundering: these are the Anti-Corruption Policy, the Code of Corporate Ethics, the Business Partner Code, the Securities Execution Code by the relevant Company Officials, the Regulation on Conflict of Interest Prevention and Resolution, the Policy of informing about violations.

The leading role in the prevention of corruption is vested in the Global Compliance Officer, the Directorate for Control, Internal Audit and Business Coordination and the Resource Protection Directorate[7], which in their turn coordinate the activities of the relevant units on the production facilities of the Company. During the Reporting Period, the Company complies with relevant legislation in relation to corruption. **GRI 103 Management approaches. - Anti-corruption activities**

Anti-corruption measures are also regulated by the following documents:

- The Business Partner Code[8] that contains zero corruption tolerance rules;
- Code of Corporate Ethics;
- Provision on prevention and resolution of the conflict of interest;
- Internal labour regulations;
- Information Security Policy of UC RUSAL;
- Information security management policy;
- Policy on prevention of unfair actions;
- Regulation on audit of planned actions for compliance with antimonopoly requirements.

The Company complies with anti-money laundering legislation and has anti-money laundering policies set out in its Code of Corporate Ethics and the Business Partner Code. **HKEx Appendix 27 KPI B7**

---

6 Automatic control of coherence and the need for disclosure of transactions at the Hong Kong Stock Exchange and to the shareholders in case of exceeding the set limits and regulations for related transactions control.

7 Activities of this business unit includes anti-fraud measures.

8 See the document con the website of the Company (*http://rusal.ru/development/partnercode.php*)

The Directorate for Control, Internal Audit and Business Coordination conducts regular audits that either prevent possible violations or minimise the consequences of violations that do occur from time to time. Risks in the area of corruption and fraud are analysed and incorporated into the Company's Risk Map. During the Reporting Period, the Company complies with relevant legislation in relation to fraud and extortion. **GRI 205-1**

As a result of the audits conducted by the Company's Directorates and Divisions in 2017, 8 employees were dismissed, 121 employees received various disciplinary sanctions. **GRI 205-3**

All employees are informed about existing anti-corruption and fraud prevention procedures. In addition, the HR Directorate regularly conducts training of staff in anti-corruption techniques, and an exchange of experience in this area is conducted within the framework of the annual gathering of the heads of resource protection units.

Hotline

One of the effective tools for combating corruption and fraud is a hotline (the "**Hotline**"). A message through the Hotline can be sent by all employees and third parties having information about activities of the Company. **GRI 205-2** The Hotline provides an anonymous way to send the message and a way in which the name or other identification method of the sender is specified.

All communications to the Hotline undergo a registration procedure and then an investigation of all the facts presented in the communication is conducted. All messages received by the Hotline, including anonymous ones are subject to mandatory verification. Depending on the nature of the communication, the managers of the special units of the production facilities or divisions or directors of the Company are involved in the verification of the reported facts. The audits of the Directorate for Control, Internal Audit and Business Coordination may be initiated in response to the signals. After the audit, the complainant receives a response, and the Company guarantees the confidentiality of all communications.

In 2017, the Hotline received 29 messages, of which:

- Unscrupulous actions and unethical behaviour by the Company's employees: 2 (6.9%);
- Issues with abiding by the labour laws: 18 (62.1%);
- No-purpose messages - 8 (27.6%);
- Other (customer's complaint about the duration of product load) - 1 (3.4%).

In 2017, employees of overseas production facilities did not call the Hotline.

In 2018, events are planned to promote the Hotline in order to inform all employees of the Company about the existence of such a line, as well as to form an adequate attitude towards informing the Company's management team about unscrupulous actions.

Procurement

In view of the fact that the Company is engaged in the procurement of a large volume of raw materials, supplies and services, the special area of work of the Directorate for Control, Internal Audit and Business Coordination is the supervision of procurement activities. A Tender Committee is operating under the chairmanship of the Director of Control, Internal Audit and Business Coordination: it is composed of the representatives of key business units of the Company. As a result of the work of the Tender Committee, financial savings of USD 14.2 million were achieved.

RISK MANAGEMENT SYSTEM

Risk analysis

In order to reduce the negative impact of potential threats and ensure consistent and sustainable business development the Company has built a risk management system that is an integral part of its corporate governance system. Its main goal is to choose the most effective methods for managing each identified risk and make sure management and shareholders of the Company are kept informed of the risks the Company is facing. **GRI 102-15**

The risk management system is an ongoing process at all levels of management aimed at accumulation and proliferation of knowledge about the risks within the Company.

According to the Company's Risk Management Policy, control over the competence of the risk management process is carried out by the Directorate for Control, Internal Audit and Business Coordination. **GRI 102-29, GRI 102-21, HKEx Appendix 27 KPI para 9, 10**

The main internal instruments governing this area are:

- A risk management policy that defines the overall concept and responsibilities of the staff.
- Risk management regulations describing the main tools and methods for identification, assessment and mitigation of the risks
- Regulations on risk management by the employees (Transport and Logistics Directorate).
- Risk management regulations of the Alumina Division.

The key elements of a risk management system include: identification and assessment of risks, development and implementation of risk mitigation activities, reporting on results of risk management, and evaluation of the effectiveness of the risk management system. This work involves a number of stages: **HKEx Appendix 27 KPI para 9**

- independent risk audits by external specialists for risk mitigation purposes and optimisation of insurance programmes;
- preparation of the annual Corporate Risk Map for four risk groups (operating, financial and market, corporate, project) and risk types (energy, technology, price change risks, legislative, legal, environmental, credit, security risks, etc.). The Audit Committee is provided with quarterly reports on the status of the risk management system; **GRI 102-33**
- evaluation and audit of the risk management system;
- preparing the risk insurance programme.
- a workshop on the risk management system of the Company for risk supervisors in the divisions and directorates;

The audit procedure consists of planned activities under the risk maps for the production areas and the solution of the tasks set by the Company's management authorities. The purpose of the audits is to identify significant risks, to assess existing key business process indicators, and to make recommendations to improve the internal control system, as well as to oversee the implementation of the recommendations resulting from the audits. Key risk measurement tools:

- financial risk evaluation (USD million);
- probability of risk materialisation (0% to 100%);
- probable damage (USD million);
- risk criticality (points 1 to 5).

The Directorate for Control regularly submits reports on its activities to the Audit Committee under the Board of Directors. Based on the submitted reports, the Audit Committee under the Board of Directors evaluates the Company's risks, as well as the results of risk management programs, once a quarter. **HKEx Appendix 27 KPI para 9, GRI 102-21**

Work continues on new areas of risk that have not been identified early, as well as work on improving the quality of information provided by the Company's production facilities.

Monitoring, reporting and performance evaluation

Directorate for Control, Internal Audit and Business Coordination reports regularly on its activities to the Board of Directors, the Audit Committee and the Review Commission, supplying them with the following information: **GRI 102-31 HKEx Appendix 27 KPI para 9**

- a report on the risks that were materialised in the previous year (annually);
- submission of the Corporate Risk Map for the following year (annually);
- report on the status of the Company's risk management (quarterly).

The Audit Committee monitors the compliance by the Company's management of risk management policy and procedures. The Audit Committee and the Board of Directors review the risk profile and results of performance of the Risk Management Programme on a quarterly and yearly basis. The Review Commission conducts an independent evaluation of the effectiveness of the risk management system. **GRI 102-21**

In case of an event occurring or planned that will have a significant impact on the Company, the managers are promptly informed (according to the Regulations on Management Notification about Accidents in Company's Operation, 2nd version approved by the Instruction of the Company's management on January 23, 2017). **GRI 102-31**

According to the Audit Committee and the Board of Directors, during the year ended December 31, 2017, the internal controls of UC RUSAL operated in accordance with the Corporate Governance Code. **GRI 102-30, HKEx Appendix 27 para 9,10**

Major risk groups and their evaluation

The quantitative risk evaluation is based on two key factors describing the significance of risks:

- risk event probability;
- financial evaluation of probable losses – risk extent describing the consequences of risk materialisation.

The combination of probability of a risk event and financial risk evaluation is an indicator of risk criticality, which allows assessing the consequences of the effect after a risk event has materialised. The Company has determined the following risk categories and types of activities that can help mitigate them:

Operating risks

- scheduled preventive repair of equipment;
- control of the quality of rendered services of repair and operation of equipment by personnel;
- improvement of the quality of finished products, quality control of raw materials;
- conducting regular training on health and safety;
- timely receipt of permits for emissions/discharges of pollutants; conducting negotiations with regulators;
- conducting negotiations with carriers, ports and other agents of transport infrastructure; reorientation of cargo flows;
- insurance of risks (property, equipment, goods)

Financial and market risks

- search for new sales markets with high profitability of sales;
- monitoring of sales markets (reorientation of supplies from the international to the domestic market);
- timely adjustment of contractual relations;
- adjustment of the production programme;
- negotiations with banks to optimise the terms of loan agreements;
- consideration of the possibility of sale of non-core assets and other measures to increase cash flow.

Company-wide risks

- protection of rights in court;
- control of the level of labour remuneration at the production facilities relative to the level of the region/labour market;
- wage indexation;

- optimisation of the system for identifying, preventing and neutralising external threats to material and financial resources;
- monitoring of the political situation and conducting negotiations with public authorities.

Project risks

- implementation of projects in strict compliance with approved schedules;
- control over holding of competitions and execution of contracting agreements;
- control over compliance with the time and quality of work performed;
- strict observance of all regulations, rules and instructions;
- negotiations with relevant government and regional authorities in the implementation of major projects.

The management of the key risks in the area of sustainable development

Risks	Description	Management measures
Environmental risks	Risks associated with damage to the environment from the Company and increased fees for the negative impact on the environment	In order to reduce the risks, the Company monitors environmental legislation and implements a range of environmental protection activities (e.g., monitoring of red mud disposal area). *Please see details in the Environment Protection Section*
Violations in the area of health and safety	Risks related to the health and safety of employees	In order to prevent accidents, the Company develops the system of management of health, industrial and fire safety, including the assessment of risks in this area, conducts training of employees, implements programmes and activities to ensure safe working conditions, and conducts management audits. *Please see details in the Work Safety section*
Risks associated with social tensions	Risks arising from the emergence of social tensions due to staff dissatisfaction with the current situation at production facilities	In the context of risk management, constant explanatory work is conducted with staff, management and trade unions. Work on the prevention of these risks has been systemised, so far the risks are at a minimal level. *Please see more details in the Employees section*

Main results in 2017

Main results in 2017

- 108 audits were carried out, including 55 unscheduled audits performed at the request of the Company's management. The audit plan was performed by 98% (53 of 55 projects were implemented, one project was cancelled in connection with the loss of relevance, one was postponed to 2018).
- The creation of the Company's annual Risk Map, quarterly monitoring of the main risks and timely reporting of risk management status to the shareholders and Company management are organised.
- Operation of UC RUSAL Hotline was ensured.
- The Directorate for Control, Internal Audit and Business Coordination has continued to implement measures to improve monitoring in the following areas:
    - compliance with the Company's regulatory documents;
    - conducting of HR procedures;
    - opening and implementation of investment projects etc.

Plans for 2018-2019

- Improvement of internal control system, prevention of risks of fraud and corruption, increase of control of asset safety, minimisation of economic and reputational risks for the Company;
- Assessment of competencies of the Directorate for Control, Internal Audit and Business Coordination; creation of a model of competencies; development of individual development plans;
- Ensuring control and timely reporting to the Board of Directors of the Company about the risks relating to environmental aspects of the Company's operation; conducting internal audits of business units of the Company with due regard to the targets of environmental (including greenhouse gases) and industrial safety;
- Ensuring functioning and improvement of the Company's risk management system, providing monthly reports to the management of the Company, shareholders and the Board of Directors;
- Ensuring support and control over the regulation of business processes of the Company and timely updating of regulatory documents.
- Implementation of the monitoring system of Corrective Measures Plans (CMP) based on the results of inspections;

- Optimisation of procurement activity.
- Creation of integrated procedural support (ensure support and control over the regulation of business processes of the Company).
- Evaluation of audits and identification of critical areas and business processes/subprocesses not previously audited in the framework of the "Universal Audit" project. Taking into account risks assessment for the specified areas and business processes, it will be decided whether to include the projects in the audit plan or not.

ETHICS AND HUMAN RIGHTS

Management approach

UC RUSAL pays due attention to ethics and respects human rights. The Company shares the principles enshrined in the conventions of the International Labour Organisation, the Universal Declaration of Human Rights and the UN Global Compact, and applies the business guidelines in terms of human rights and the Guideline for Multinational Companies of the Organisation for Economic Cooperation and Development as a methodical basis for building a management system in this area.

The main documents, which set out UC RUSAL position on ethics and respect for human rights, are the Code of Ethics and the Business Partner Code; some provisions are also contained in the HR Management policy. Together, these documents define the policy of UC RUSAL with respect to compliance with and respect for human rights.

Issues of compliance with the Business Partner Code are included in the Supplier's Questionnaire, which the counterparties must fill in before completing the audits.

The Company has also adopted a number of documents, including Provision on the functioning of the Corporate Ethics System and the Regulation on the Corporate Ethics Officer whose purpose is to further improve the mechanisms for ensuring high ethical requirements. **GRI 102-16**

Implementation of the Company's policy in the field of human rights **HKEx Appendix 27 KPI B4, B5**

Human rights principles	Corporate documents	Tools and procedures for verification and response to HKEx Appendix 27 KPI B5.2
Non-discrimination on the grounds of gender, race and/or religion **GRI 406-1**	Code of Corporate Ethics Regulation on the corporate ethics officer Provision on the functioning of the Corporate Ethics System HR Policy Business Partner Code	Hotline Institute of corporate ethics officers (100% coverage of the production facilities)
Abandonment of child and forced labour **GRI 408-1, GRI 409-1**		
Provision of working conditions that are safe for life and health of workers, measures to prevent industrial injuries		
Compliance with the regulations relating to hours of work and rest, overtime, salary, working hours, etc. **GRI 409-1**		
Compliance with the codes and regulations of business ethics and law, conducting its business without corruption; compliance with anti-money laundering legislation **HKEx Appendix 27 KPI B7, GRI 205-2**	Code of Corporate Ethics Regulation on the corporate ethics officer Business Partner Code	
Implementation of measures necessary to reduce the impact of production on environment, including the conservation of fresh water to meet people's needs	Code of Corporate Ethics Business Partner Code	Environmental reporting Management system audits (100% coverage of the production facilities)
Conformity of the services provided and goods delivered to the quality and safety standards **HKEx Appendix 27 KPI B6**	Code of Corporate Ethics Business Partner Code	QMS elements: quality services, supplier evaluation (100% coverage of the production facilities)
Respect for the cultural characteristics of the countries and regions of operation **GRI 411-1**	Code of Corporate Ethics Regulation on the corporate ethics officer Business Partner Code	Assessment of the situation during the development of programmes for local communities, meetings with community representatives (100% coverage of the production facilities) Evaluation of programmes (in Russia)

UC RUSAL pays due attention to human rights in the process of production and other activities:

- promotes respect for human rights in its own activities and the activity of its partners through the development and implementation of corporate instruments and monitoring and control mechanisms;
- conducts a periodic self-examination to determine the existence of violations of human rights in the activity of production facilities that are part of the Company (including by means of corporate ethics officers); **G4-HR9GRI 412-1**
- arranges for the registration and verification of all communications from the employees or local residents to the Hotline;
- conducts investigations into the written communications from the employees to the management of the production facilities and the Company.

Human rights monitoring procedures are part of the operating standards of UC RUSAL business units and production facilities, integrated into internal documents (labour contracts, corporate policies, labour safety regulations, etc.) and in broader procedures to ensure compliance with law.

Code of Ethics and corporate ethics officers

UC RUSAL has a Code of Ethics, which provides for the selection of ethics officers to work with employees' communication regarding work safety, compliance with labour laws, internal communication problems, and other issues. **GRI 103-2, GRI 102-17, KPI B7.2**

The principal task of the officers is to communicate directly with the employees in difficult situations to find a common solution and to implement it. If a negative signal is received from the employees about decisions concerning labour relations, the corporate ethics officer promptly interacts with the business leaders, the labour disputes commission and trade unions, and the Company's administration develops corrective measures.

Characteristics of ethics officers

Indicators	2014	2015	2016	2017
Number of corporate ethics officers	36	32	30	27
Number of communications processed by the officers **GRI 103-2**	198	156	105	97
Number of meetings held by the officers	230	314	198	246

Hotline

To work with the communications of related parties, a hotline is organised, which can be accessed by any individual or entity, regardless of where it is located, to report a problem or violation related to the business of Company's production facilities. **GRI 103-2**

Staff and local residents also have the opportunity to write to the Company's management. In each case, a comprehensive verification of the facts is carried out, and the results of the verification are sent to the claimant in writing. UC RUSAL ensures that all communications on the hotline will be kept confidential. **GRI 102-17 KPI B7.2**

Content of the business in terms of human rights

On the basis of the UN international practice and the Resource Guide to Corporate Human Rights Reporting, UC RUSAL highlights the following aspects, in which these issues may be relevant to its business in Russia and abroad:

- law enforcement in the countries of operation, handling of complaints and communications; **HKEx Appendix 27 KPI B7**
- labour relations;
- the relationship in the supply chain, including the procurement of resources from areas, where conflicts occur;
- impacts on local communities, including the equitable use of natural resources, the payment of taxes, the impact of industries on health, employment and well-being of local residents in the mining and production regions.

The Company implements projects to eliminate negative impact on human rights, and in some cases involves external stakeholders for their development.

The HR Directorate, the Directorate for Control, Internal Audit and Business Coordination, and the Legal Affairs Directorate are monitoring compliance with labour legislation in business units and at production facilities. During the on-site visits, staff interviews are conducted selectively to identify violations of labour rights (including cases of discrimination, forced labour and similar). In 2017, a comprehensive audit of HR services was conducted on all UC RUSAL production facilities; there are no violations of the labour rights of the workers. **GRI 409-1, GRI 408-1, GRI 412-1, HKEx Appendix 27 KPI B4, GRI 102-21**

The prohibitions of child and forced labour are set out in the state legislation in the countries of operation of the Company. The Company included these prohibitions in the Corporate Code of Ethics and the Business Partner Code of UC RUSAL. The Company conducts regular control actions. During inspections of financial and economic activities of the Company's operations, as well as during individual inspections of personnel, the Internal Audit & Control Directorate checks the labour contracts of personnel. No evidence of violation of these prohibitions has been identified since the establishment of the Company. **HKEx Appendix 27 KPI B4 (b)**

The compensation system using grades operating in UC RUSAL does not include a gender perspective in the determination of compensation, which ensures equal pay for equal work of men and women.

Human rights education, mainly in terms of compliance with labour rights, is provided to HR officers. **GRI 412-2**

The Company adheres to the principle of diversity and equal opportunities, which is manifested in the increased representation of women in higher levels of management, and the provision of career prospects for staff at every level. *For more information, please see the Corporate Governance and HR sections.*

Security

The safety of the employees of UC RUSAL production facilities and contracting organisations is one of the main priorities of corporate social responsibility. The policy applies to all production facilities of the Company. Health and safety management system includes mechanisms to enable the assessment of the state of work safety and to take prompt action (e.g. audits of management systems at production facilities). The requirements for compliance with work safety standards are included in contracts with service providers. *For more information, please see Labour Protection and Supply Chain sections.*

All employees of contracting organisations ensuring security at UC RUSAL operations and facilities are subject to compulsory training under the Company's approved access and internal regulations, as well as periodical briefings. **GRI 410-1**

Local communities

The Company implements charitable and social programmes aimed at improving the quality of life, health and education in the countries of operation. Programmes for local communities are addressed to small indigenous peoples, among other, with a view to providing them with clean water, electricity, social and health services. **GRI MM5, GRI 411-1**

In Guinea and Guyana, managers and specialists of the Company responsible for HR work, public relations and security issues organise planned and unplanned meetings with representatives of local communities. During these meetings, all issues related to the interaction between the Company and the local residents, including possible conflicts or disputes with local communities and indigenous peoples. Information on the results of the negotiations is sent to the relevant directorates of the corporate centre. **GRI MM7**

For more information, please see the Investment in Community Development section.

Results in 2017

In 2017, the Company received no communications about human rights violations at its production facilities, as well as significant conflict situations. There have also been no accidents during the reporting period that have damaged the life and health of workers and residents of the surrounding territories. There were no cases of violation of the rights of indigenous minorities. **GRI MM5**. In November 2017, RUSAL's representative participated in the 6th session of the Forum on business and human rights in Geneva, where they presented some aspects of the Company's activities in the field of human rights in the regions of presence.

3. PERFORMANCE MANAGEMENT

QUALITY MANAGEMENT SYSTEM

Quality Management System

Approach to management GRI 103-2

The Company has successfully established and implemented the quality management system ("**QMS**"), certified in compliance with the International Standard ISO 9001:2015 and the ISO/TS 16949 quality management standard for the automotive industry.

RUSAL QMS provides continuous improvement of business processes and management of the quality related risks and opportunities; it aims to prevent problems and reduce variations in the supply chain. The high quality of management processes is a key factors in achieving high quality products and services.

The main production facilities of UC RUSAL (Russian and international) have [9]ISO 9001 compliance certificates (in total 31 production facilities[10]).

Seven production enterprises, including the Krasnoyarsk, Irkutsk, Sayanogorsk, Bratsk, and Novokuznetsk aluminium smelters, the RESAL enterprise smelters and SKAD Casting and Mechanical Plant, and five remote functions have certificates of compliance with the requirements of the ISO/TS 16949 international standard for auto sector suppliers, and the SAYANAL foil rolling plant has a certificate of compliance with FSSC 22000 (food safety certification system). Upon completion of the Reporting period, in February 2018, the Company started transition to the new version of the IATF 16949: 2018 Standard of the Quality Management System for the automotive industry. Completion of the process is scheduled for July 2018.

Quality policy establishes uniform requirements and principles for all Company's production facilities. Quality objectives are set annually, their achievement is assessed through the key performance indicator functional units; reports are subject to review of the Executive Committee.

QMS management procedures affect the following stages of the product life cycle:

- analysis of customer requirements;
- development of new process and improvement of existing production processes;
- purchase of raw materials and supplies;
- production;
- customer related processes;
- storage and delivery of products.

---

9 For more details please see information on the website of UC RUSAL: *http://www.rusal.ru/en/clients/certificates/index.php*.

10 The function of maintaining and improving QMS at Russian production facilities is centralised in the Managing Company: 17 production facilities are accredited under a single certificate, which ensures the unification of approaches to quality assurance.

The Company's business units conduct quality conferences, as well as internal audits which assess the status of the QMS and identify areas for improvement. It is planned to introduce an automated audit management system which will be used to exercise planning, documentation and control during audits.

Quality Management Directorate is responsible for maintaining and developing QMS. At the production sites, there are local quality services accountable to directorates.

Internal audits results

	2015	2016	2017
Conducted audits	23	21	31
Implementation of the schedule	80%	91%	100%
Comments	346	380	417
of these, non-compliance with requirements	199	298	320
Developed corrective actions	375	397	381
Completed at the beginning of next year	257	303	339
% of completion	69%	76%	89%

Main results in 2017

Quality Development Strategy

In 2017, the Quality Policy, [11]Quality Manual [12]were revised, and a model of interaction between the Company's business processes was updated.[13]

The main areas of development of the Company in the field of quality are defined in the Strategy for Quality Development for 2018-2021. In order to achieve each goal, a programme has been developed, and assessment of achievement is done through weekly monitoring procedures. The following documents have been developed and implemented in the Quality Management Directorate:

- Provision on the Steering Committee for Quality;[14]
- new revision of the Consumer Claims Management Standard;[15]
- Standard Determination and implementation of statutory requirements for the products upon the analysis of customer requirements[16]

A project has been launched to implement the special requirements of the automotive standard IATF 16949: 2016 and APQP, PPAP, FMEA, MSA, SPC techniques (for more details, see the section "Training of employees in quality") on the basis of the pilot Sayanogorsk Aluminium Smelter for training and introducing the best global quality management practices based on the standards of the automobile industry and evaluation criteria of the Deming Prize.[17]

---

11 Minutes of the Executive Committee dated December 22, 2017

12 Order of the management of the Company dated February 7, 2018

13 Order of the management of the Company dated August 8, 2017

14 Order on the management of committees, commissions, boards No RGM-17-P050 dated November 3, 2017

15 Order of the management of the Company dated August 8, 2017

16 Order of the management of the Company dated June 2, 2017

17 The Deming Prize is the most prestigious quality award established by the Union of Japanese Scientists and Engineers.

QMS development

'Perfect Process'

The Perfect Process Initiative has been established with the objective to improve the stability and capability of production processes focused on meeting and exceeding of the key customer requirements.

In order to develop this or that production process to the "perfect" level, within the framework of the quality management system, work has been organised; it involves a number of stages, including:

- identification of key customer requirements;
- benchmarking on quality, defining of gaps and opportunities;
- identification of special product characteristics;
- identification of special process parameters in correlation with the characteristics;
- assigning the control methods and measuring system analysis;
- monitoring and evaluating the process stability and capability;
- development and implementation of corrective actions to improve the process and product;
- customer evaluation on effectiveness.

In 2017, 39 projects were commenced to achieve the status of "perfect process" for products for key customers, including: 23 in the Aluminium Division, 8 in the New Projects Directorate; 4 in the Packing Division. To provide methodological support and monitor progress in the implementation of projects in each area, curators have been appointed by the Quality Management Directorate/ Departments of Quality Assurance Divisions.

Focused Improvement Programmes with the Key Customers

In order to activate and manage ongoing continuous improvements in the product, process and system, the "Focus Improvement Programme" initiative is implemented to maintain and develop cooperation with the Key or Strategic Customer and take into account its priorities for achieving the status of RUSAL as a Priority Supplier and establishing long-term partnership for the future.

The basis for implementing the Focused Improvement Programme is a certified "perfect process".

The Focused Improvement Program was developed with the goal to build relations between RUSAL's plants and the Consumer on non-commercial aspects determined by the following principles and criteria:

- targeting a key customer;
- establishment of direct, sustainable contacts between representatives of the plants on the part of both RUSAL and the Consumer, including visits to client production facilities to present the results of certification of production processes;
- building regular direct communication with the agreed periodicity and format for receiving feedback from the consumer regarding the quality of the product, the process and the system (benchmarking);

- implementation of continuous improvements in product characteristics, process and system parameters based on received feedback from the consumer;
- increasing customer loyalty by means of effective development of cooperation for the future;
- identification of the main directions for organization of effective technical support of the consumer to enhance the culture of aluminium consumption.

In 2017, 24 Focused Improvement Programmes were launched for key customers, including 17 programs in the Aluminium Division, 2 ones in the Directorate for New Projects; and 5 in the Downstream Division. In order to provide methodological support and monitor progress of the projects implementation in each direction, curators have been appointed by the Directorate of Quality Management and the Quality Assurance departments of the Divisions.

Teams addressing chronic claims

Analysis of the main causes of chronic claims and corrective actions to address these issues are under the close attention of the heads of RUSAL facilities. To solve recurring quality problems, teams are organised to resolve chronic claims (Variability Reduction Teams, VRT), they are managed by the directors of the Quality Assurance Departments. The effectiveness of the corrective actions is monitored through internal quality indicators, inspections and forwarding checks of shipped products in ports, as well as through consumer feedback. The status of solving problems with respect to chronic claims and the lessons learned are regularly reviewed by the Quality Steering Committee.

Training of employees in quality

In 2017, personnel was trained on the main topics in the field of quality:

- requirements of international standards ISO 9001 and IATF 16949;
- methodology of projects for "perfect processes";
- implementation of the focused improvement programs with the key customers;
- training of internal auditors and coaches of RUSAL;
- training of experts on the standards of the International Automotive Task Force (IATF) and Total Quality Management (TQM)
- Claim management using 8D.[18]

Personnel training is carried out on a regular basis in accordance with the requirements of international ISO and IATF standards, as well as with advanced quality tools such as the "Failure Mode and Effect Analysis" (FMEA), "Statistical Process Control" (SPC), "Measurement System Analysis" (MSA), "Advanced Product Quality Planning" (APQP), etc.

[18] A standardised approach to identifying and solving problems which involves 8 actions with specific input and output.

Number of employees trained in quality, persons

Type of training	2015	2016	2017
Internal	175	145	1495
External	227	42	418
In the distance learning system	187	715	5238
Total	**589**	**902**	**7151**

Achievements in 2017

- RUSAL Quality Strategy and Policy were updated;
- RUSAL Business Process Model was revised;
- 35 projects on Process Certification at RUSAL production facilities were implemented;
- 35 Focus Improvement Programmes with Key Customers have been deployed;
- The Customer Claims Management Process have been further enhanced;
- The duration of RCCA response on customer claims was reduced from 67 business days in 2015 to 11.8 business days in 2017;
- The total number of customer claims decreased by 25% in relation to the previous year;
- The Customer Satisfaction Index rose from 94% in 2016 to 97% in 2017;
- 22 Master Supplier Statuses were awarded to RUSAL plants by customers;
- The qualification of Audi is passed; the qualifications of BMW and Benteller are in process.

Plans for 2018

- Sharing the best practice among the plants and divisions based on the results of the Perfect Processes implementation for all VAP production lines by the type of alloys;
- Involvement of shop floor employees in quality improvement activities and application of quality tools in their daily work;
- Development of a system of sustainable direct contacts with key customers to achieve the status of Master Supplier, strengthening the RUSAL brand and building successful cooperation for the future;
- Building Quality into production processes through automation, statistical process control, motivation for quality and reengineering of inspection operations;
- Management of Customers Specific Requirements for products, processes and systems, including the requirements of the German Automobile Industry Quality Standard (VDA);
- Development of a pilot TQM Business Excellence Model at Sayanogorsk Aluminium Smelter;

- Implementation of the IATF Expert Training and Qualification project on the practical application of quality tools and automotive industry manuals at a pilot site;
- Setting of Quality College of advanced knowledge and competency development for the Plant Quality Managers;
- Ensuring a unified approach to quality management of incoming materials;
- Deploying requirements for suppliers on advanced product quality planning (APQP/PPAP) and G8D;
- Designing quality cost management;
- Transition and certification under the new version of IATF 16949 automotive industry standard;
- Creating a digital QMS model.

UC RUSAL BUSINESS SYSTEM

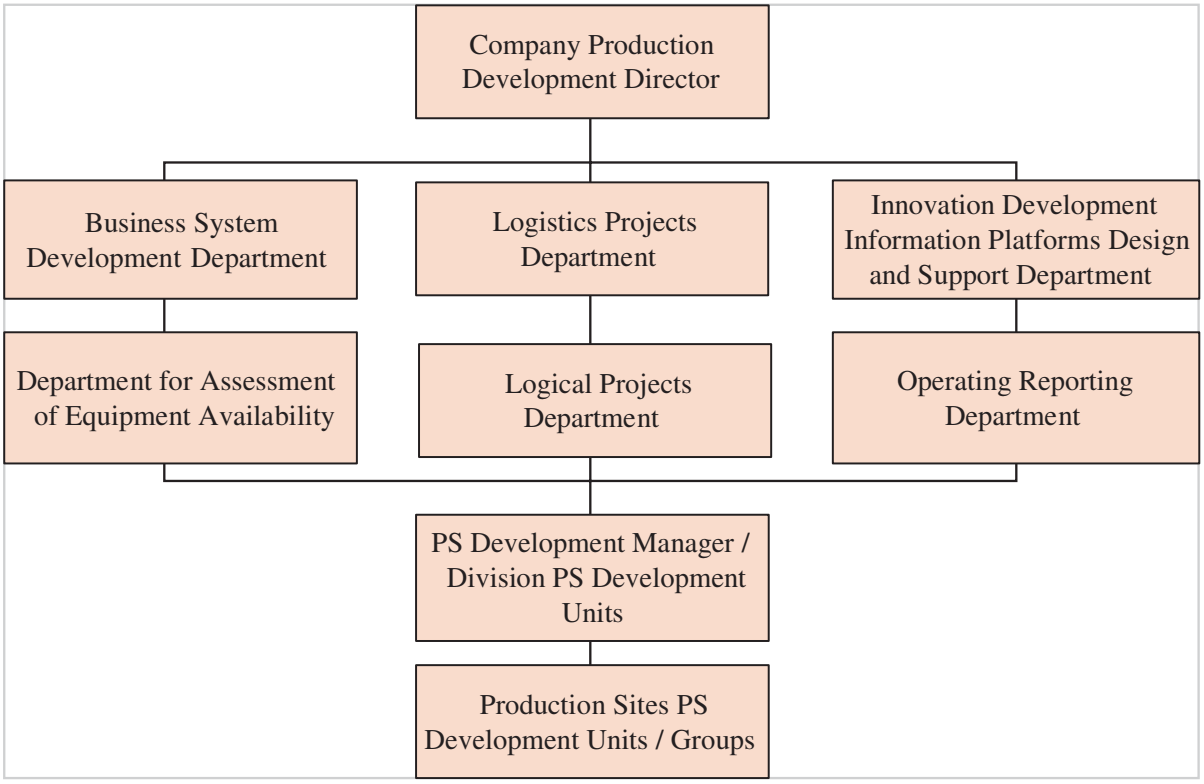
Management approach

UC RUSAL Business System is the environment for the development of personnel and the creation of a culture aimed at the continuous improvement of the Company's production and business processes. It ensures system approach to the application of tools for increasing efficiency, promotes the introduction and proliferation of production system of RUSAL.

UC RUSAL Business System ("**BS**") is based on the TOYOTA Production System (TPS), which allows for continuous improvement of production and business processes, promptly responding to customer needs, and remaining an effective company in the world market.

The purpose of the building and development of the BS is to build through business chains from the supplier to the customer and to manage their expectations and needs effectively, and to introduce a culture of continuous improvement on production facilities. BS is set up on a Company-wide scale, including overseas assets.

Structure of the BS management



At the end of 2017, at the Production Development Directorate, there were structural changes. In order to provide better training in the field of equipment maintenance, the Department for Assessment of Equipment Availability has been transferred to the BS Development Department. Customer Support Department has been renamed into the Innovation Development Information Platforms Design and Support Department, and the Customer Technical Support Department - into the Operational Reporting Department.

Goal setting within the framework of BS [19]correlates with the overall strategic goals of the Company: key objectives and quantitative indicators are set annually for the next reporting period. There are specific goals for each division and production facility. Each head (senior foreman, head of shop, head of unit, head of production, head of the area) should have their project of BS development and report on its implementation to the CEO.

Steering committees

Meetings of on-site steering committees are held several times a year to develop the BS at the production facilities. Each of them is attended by senior management including members of the Executive Committee. In 2017, meetings of the BS steering committees were held at the sites of the Irkutsk Aluminium Smelter, "Powder Metallurgy – Shelekhov", Krasnoyarsk Aluminium Smelter (twice), the Ural aluminium smelter.

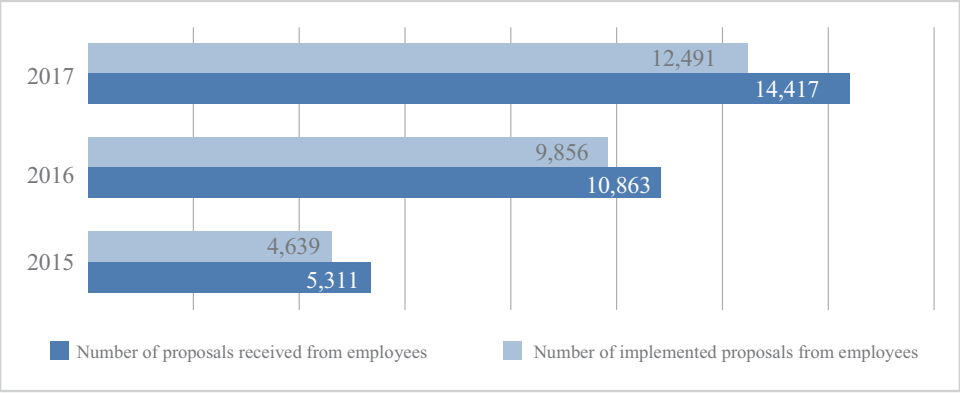
---

[19] More information on UC RUSAL BS is published on the corporate website: *http://rusal.ru/development/production_system/*.

Kaizen workshops

Kaizen workshops are an effective tool for optimisation of production processes and standardisation of technology operations that allow employees to implement the proposed improvements. Kaizen workshops operate on 10 production facilities of UC RUSAL in Aluminium, Alumina and Packaging Divisions, as well as the New Projects Directorate.

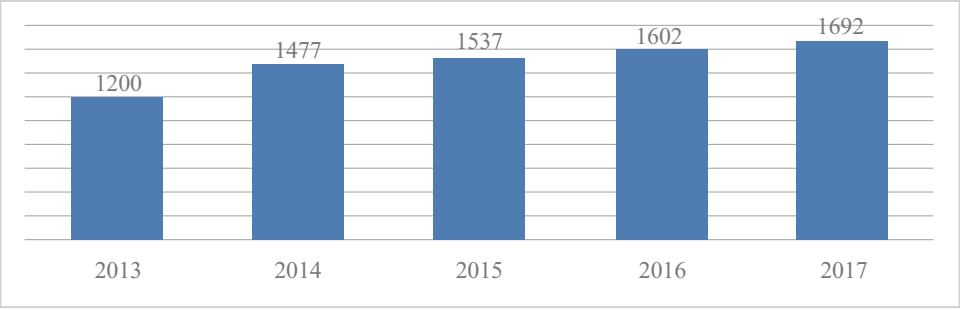
Number of Kaizen improvement indicators for the BS development



'Improvement of the year' competition

The annual 'Improvement of the year' competition is held in four categories: Security, Quality, Performance, and Cost Effectiveness. The proposals received from the employees are evaluated, the best are recognised as winning and implemented in production. UC RUSAL receives a significant social and economic effect every year from the implementation of the proposals received. In 2017, the economic effect totalled 603.8 million roubles (USD 10.4 million).

Number of employees who took part in the competition



Training

The implementation of BS requires maximum participation, understanding and commitment of all employees of the Company, including senior management. Therefore, staff development and training in relevant management mechanisms and tools, and the introduction of procedures for the identification of leaders at the workplace (the BS 250 programme) are mandatory elements of the BS management.

Together with the HR Directorate, training is provided to the members of the Executive Committee and to the Kaizen teams members of production facilities on the principles of the BS at the training sites and model sites of the key production facilities. In 2017, all members of the Executive Committee, including, as well as 19 top managers of production facilities were trained and qualified in the methods and approaches of the Business System. In the Reporting Period, the main focus was on distance learning. The number of employees that use e-learning system has increased more than three-fold as compared to the previous period.

Training of employees in the principles and tools of the BS

Indicators	2015	2016	2017
internal training, persons	1,213	3,780	2,280
external training, persons	207	27	44
distance learning, persons	3,030	3,844	12,399
Number of on-hand training sessions on various topics related to the organisation and improvement of the production process	32	306	84

The BS 250 personnel reserve training programme ensures the continuity of approaches to managing the implementation of the BS and accumulates the Company's experience. In three years (2015-2017), about one third of the total number of programme participants were appointed to higher positions or were subjected to horizontal rotation, including between production facilities. In 2017, 12 participants of the programme were appointed to positions of the level UD-1, one participant was appointed to the level of acting Managing Director.

In the Reporting Period, it was decided to conduct programmes for training personnel reserve "BS 250" annually. At the same time, at least 10% of the total number of candidates must complete a full cycle of training.

Business system development in 2017

The Company has a strategic goal of lowering the unit cost of production. Business system projects can make a significant contribution to its achievement by lowering transport costs, eliminating the cost of repackaging, and by the lack of claims from the customers in terms of delivery schedules, effective maintenance and maintenance of equipment and other improvements.

On a systematic basis, work is underway to increase the efficiency of production equipment, including the reduction of scheduled and unplanned downtime. The methodology for assessing the overall equipment efficiency ("**OEE**"[20]) is introduced. The Company analyses the data in order to find additional reserves for equipment operation.

---

[20] This indicator is calculated according to the formula: OEE = A (availability rate) x P (performance factor) x Q (quality factor) x 100%.

In 2017, new pilot projects to optimise the supply chain and increase the volume of output were continued and opened due to improved equipment efficiency. The following results were achieved:

- Two projects were implemented at Krasnoyarsk Aluminium Smelter. As a result, the performance of the casting unit No 5 for the production of slabs increased from 10.5 thousand tonnes to 12.6 thousand tonnes per month, and the performance of the casting unit No 16 for the production of T-bars rose from 4900 tonnes to 5647 tonnes per month;
- At the Krasnoyarsk Aluminium Smelter, a pilot project "Optimisation of the Logistic Scheme for the Supply of 3104 BT Slabs on the Casting Unit No 4" was launched. Performance of the casting unit increased from 6,500 tonnes to 8,482 tonnes per month.
- The Bratsk Aluminium Smelter, a pilot project to increase performance on the casting unit No 10 was commenced. As a result, performance increased from 5,970 tonnes to 7,037 tonnes per month.
- at the foil rolling mill "SAYANAL", the project "Improvement of the operational availability of the equipment of the FPP on the example of the rolling mill S-2" continued as part of the implementation of the preventive maintenance approach. As a result, due to reduced downtime of equipment and reduced scheduled maintenance time, OEE grew from 51% to 57%. Performance of P-2 rolling mill increased from 2,720 to 2,840 tonnes per month.

RUSAL shares its experience in the development of the business system by interacting with a number of external partners.

- In March 2017, RUSAL employees, together with the medical staff of the Moscow City Clinical Hospital No 2017 (neurological department), applied the tools of the Business System. According to the results of the work, a list of proposals was made to improve the quality of patient care and the working conditions of the staff.
- At the production facility of the meat processing complex "Agroholding-Kuban", as a result of joint work on the use of business system approaches, specific measures were developed and implemented to reduce losses and increase the volume of boning.
- Before the opening of the new terminal of the Krasnoyarsk International Airport, RUSAL's working group conducted the testing of the passenger service system. The airport staff are being assisted in improving the quality of service.
- In October 2017, RUSAL working group visited the model units of the Russian Railways and became acquainted with the work of the training centre for the BS approaches and with projects implemented at the depot "Podmoskovnoe" and at the Lublino station. A month later, a joint meeting of the Russian Railways at the Krasnoyarsk Aluminium Smelter took place as part of a return visit. Joint projects for 2018 were selected during the visit.
- Representatives of Ingosstrakh Insurance Company became acquainted with the experience of introducing BS at Krasnoyarsk Aluminium Smelter.

BS development Indicators

Indicators	2015	2016	2017
Number of projects aimed at the development of UC RUSAL BS (Company-level projects for logistics operations, quality, supplier development, etc.)	119	312	163
Number of on-site projects (production facility-level projects aimed at reducing losses, optimisation of equipment operation, etc.)	403	415	392
The total economic effect from the implementation of measures on BS introduction, million.	34.9	53.6	65.3

Interaction with consumers

Priority in business system development is to build through business processes from supplier to consumer, to work with key customers and suppliers.

The key suppliers of the Company include producers of alloying materials, coke (Lukoil-Perm), pitch (West Siberian Metallurgical Plant), aluminium fluoride (PhosAgro) and other raw materials and supplies required for the production process. The professionals of UC RUSAL Business System meet with partners, talk about TPS, show examples of the impact of the business system on production culture and processes, then help them fix the problem areas. Thus, the supplier is given knowledge and training, when interested.

For the benefit of the consumers and to increase flexibility in production and logistics, a number of projects were opened in 2016-2017 to reduce the lead time (the period from the receipt of an order to the delivery of the ordered products). In 2017, the following results were obtained:

Project	Customer	Achieved lead time, days
'Optimisation of the supply chain of the finished products of the caster No 5 of the Krasnoyarsk Aluminium Smelter to European consumers'; (slabs).	Elval S.A.	53
'Optimisation of the supply chain of the finished products of the caster No 10 of the Bratsk Aluminium Smelter to Asian consumers'; (slabs)	Kobe Steel LTD	53
'Optimisation of the logistics of the supply of 3104BT slabs produced by the Krasnoyarsk Aluminium Smelter (caster No 4)'	UACJ Corporation	63
	Novelis Korea Limited	41
	Arconic SMZ	23
'Lead Time Reduction in the USA. Reduction of the lead time of the orders and improvement of the utilisation of the capacities of primary alloys in T-bars, caster No 16 of the Krasnoyarsk Aluminium Smelter';	General Aluminium Manufacturing Company	57

In 2017, pilot projects to reduce lead-time were launched at the SAYANAL foil rolling facility for the key Russian consumers and consumers in Europe and USA.

Against the backdrop of the tendency for the substitution of 1050 alloy for 4006 alloy among the producers of tableware (Elval, Impol, Profilglass), a project was launched at the Bratsk Aluminium Smelter to increase the slab output of 4006 grade up to 10 thousand tonnes per year. To fulfil the order volume, the AlSi24 master alloy production scheme (with a silicon content of 24 to 30%) was developed at the branch of the Bratsk Aluminium Smelter in Shelekhov, for delivery to the Bratsk Aluminium Smelter. In the future, it is planned to scale the results obtained to other operations, products and consumers of the Company.

In late 2017, a project was launched to improve the production of wheels at the Casting and Mechanical Plant "SKAD". The main improvements are aimed at introducing preventive maintenance of equipment and improving quality. **GRI 102-10**

Plans for 2018

In 2018, a project will be implemented to organise the stable delivery of finished products along the railway to the ports of the Far East.

It is planned to open a pilot project to increase the daily rate of loading slabs and billets in the port of Zarubino.

Crowdsourcing

For last two years, the Company has been working on the use of crowdsourcing when external communities of specialists and experts are engaged in solving problems: individual scientists, universities, research institutes, etc. For the period from March 2016 to December 2017, on the crowdsourcing platform www.innocentive.com, 12 different competitions were held to find new ideas for corporate tasks and to attract business partners under a contract with the US company InnoCentive Inc.. More than 1,300 solvers were registered as participants, in total about 250 ideas were submitted for the competition. As a result of the competitions, three ideas (projects) were selected for implementation, and their authors were rewarded. Another 21 ideas of interest for business are at the decision-making stage (selection for implementation).

Also, in 2017, work continued with the winners of the previous year's competition. Specialists of the Directorate for New Projects and the "Innovation Centre" of Powder Metallurgy-Shelekhov are working on a project to enter the additive technology market in Canada, the implementation of which is scheduled for 2018. The idea of a project for joint research in the field of 3D printing, as well as the promotion of aluminium powdered products by RUSAL in the Canadian market, is offered by Cliff Edwards (Vancouver, Canada).

Also, the Company is developing its own innovative crowd platform to attract ideas and solutions within and outside the Company. This tool is intended both for collecting proposals for solving business problems (holding thematic competitions), and for the purpose of free submission of ideas on any topic. Expected results of the platform introduction:

Increase in external effectiveness of the Company's activities

- Prompt response to market demands, creation of new products and services
- Recording and mastering the best experience and best practices

Increase in the internal efficiency of the Company

- Retrofitting of the management system, optimisation of existing business processes
- Identification of problems in the activities of the Company at the stage of origin and their timely addressing
- Development of a corporate culture of innovation, the formation of a creative atmosphere
- Creation of a career elevator - people search through ideas search

SUPPLY CHAIN

Supply chain structure

As one of the world's largest producers of aluminium, UC RUSAL works with a large number of suppliers of electricity and fuel products, raw materials and supplies, equipment and technology, as well as services, including contractors directly operating at Company's production facilities. **GRI 102-9**

UC RUSAL suppliers include the largest Russian and international companies (RusHydro, Russian Railways, Vnesheconombank, EuroSibEnergo, KBM, Hebei Sitong, etc.). Most of them publish regular sustainability reports or have a formal position in key governance aspects.

In turn, UC RUSAL acts as supplier to companies working in such industries as engineering, automobile production, metallurgy, chemical, transport, construction, electrical, food, packaging, etc. *(please see the About the Company section).*

The Company also interacts with organisations that provide intermediary services (distributors and wholesalers, commodity exchanges and electronic trading platforms). New companies appear every year that become suppliers for UC RUSAL. In 2017, for example, the Company began working with several new suppliers of coke, aluminium fluoride, pitch, baked anodes, master alloys.

System of relations with suppliers GRI 102-9

The Company is open to cooperation on a long-term basis with organisations that share its commitment to high standards of business ethics, quality and production effectiveness as set out in the Business Partner Code.

The objective of the Company is to build a long-term relationship that allows all parties to meet each other's needs and expectations the highest possible extent, and to combine efforts to achieve sustainable development goals. The Business Partner Code adopted by UC RUSAL in 2016 contains principles of interaction with related parties that the Company intends to extend to the supply chain.

UC RUSAL uses a risk-based approach, while working with suppliers, including tools for managing social and environmental risks.

Implementation of the Business Partner Code HKEx Appendix 27 KPI B5

All partners with whom the Company has direct contracts have been sent a proposal to sign a Declaration of Accession to the Code on a voluntary basis. The content of the Code and the purpose of its signing were explained in direct communication with partners as well as during the audits of the suppliers. The producers of raw materials have raised the issue of the need to develop a similar document for their suppliers, which is seen by the Company as a positive signal showing that the principles set out in the Code can be proliferated along the supply chain. **HKEx Appendix 27 KPI B5.2**

Compliance with the principles of the Business Partner Code is verified during the review of the Supplier Questionnaire (completed by the partner prior to the supplier audit), as well as by observation during supplier audit.

In 2017, more than 30 suppliers of raw materials joined the Business Partner Code.

Procurement of raw materials and supplies for the production of the main products

The specificity of UC RUSAL production entails that the quality of 80% of the final products depends on the suppliers. Therefore, the quality and timing of the supply of raw materials and supplies for the production of the main products are critical factors. All delivered products must comply with the requirements of the contracts and the regulatory documents, and suppliers' QMS must comply with UC RUSAL requirements.

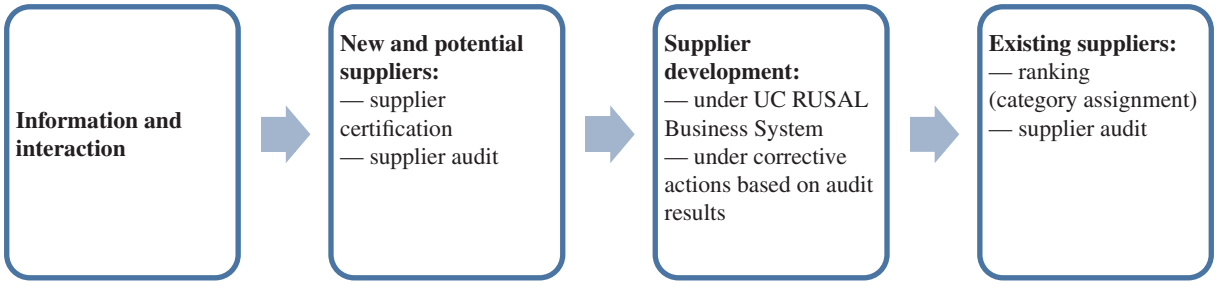
In 2017, the UC RUSAL worked with over 120 producers of raw materials and supplies, equipment and auxiliary materials for production, the majority of which were Russian and Chinese companies. Total purchases amounted to USD 916 million (650 million in 2016).

In the procurement of raw materials and supplies satisfying the requirements of UC RUSAL, the Company prefers suppliers from Russia and other CIS countries, building relationships based on long-term contracts. If there is insufficient supply, additional quantities are purchased abroad.

Procurement structure, % of total acquisition of raw materials and supplies for the production of the main products

Indicators	2016	2017
Green petroleum coke and calcined petroleum coke	22.2	19.4
Green pitch coke and pitch	21.5	23.8
Anode blocks	19.2	20.8
Aluminium fluoride	15.5	11.6
Fuel oil and industrial oil, diesel fuel, gasoline	13.1	14.7
Silicon, magnesium, master alloy and lightweight materials	7.2	8.5
Other	1.3	1.2

Supplier procedures cover a full cycle of communication, from informing new and potential organisations to assessing the results of collaboration with long term suppliers of UC RUSAL.



The system of requirements of UC RUSAL to the suppliers of raw materials and supplies for the main production is defined in the following main documents of the Company:

- Quality agreements
- Procurement regulations
- Rules for the certification of suppliers of raw materials and supplies;
- Regulations for audits of plants manufacturing raw materials and supplies;
- Regulations on supplier accreditation;

- Supplier rating assessment method;
- Supplier QMS development manual;
- Methods of organisation of accounting of raw materials and supplies with deviations from regulatory requirements.

In 2017, the supplier rating assessment method was revised. Model agreements on quality for inclusion in the contract were developed, they are being introduced now.

On the other hand, Procurement regulations, Rules for the certification of suppliers, Procedure for supplier audits are being revised.

The requirements in the area of health and safety of the suppliers are set out in the following documents:

- Regulations on contractor management in the area of health and safety, fire and environment safety;
- Regulation on Supplier Accreditation System.

Information and access to the procurement system

To ensure the sustainability of production processes, the Company is constantly looking for the best and most promising offers in the market, and tracks the emergence of new products and services. The Company adheres to an open purchasing information policy, giving potential suppliers equal access to information and orders.

The main source of information is the suppliers' portal, which is visited by about 3000 organisations daily. The acquisition plan of UC RUSAL is annually published in the suppliers' portal. An electronic trading platform of Transtrade has been created to enhance the transparency of competitive procedures. The Company continues its cooperation with Fabrikant electronic trading platform, which also publishes information about UC RUSAL tenders.

UC RUSAL participates in permanent platforms that provide the possibility to interact with suppliers on a regular basis. For example, one such platform is the Market Council, a non-profit partnership aimed at bringing together the players in the energy market and large consumers of electrical power.

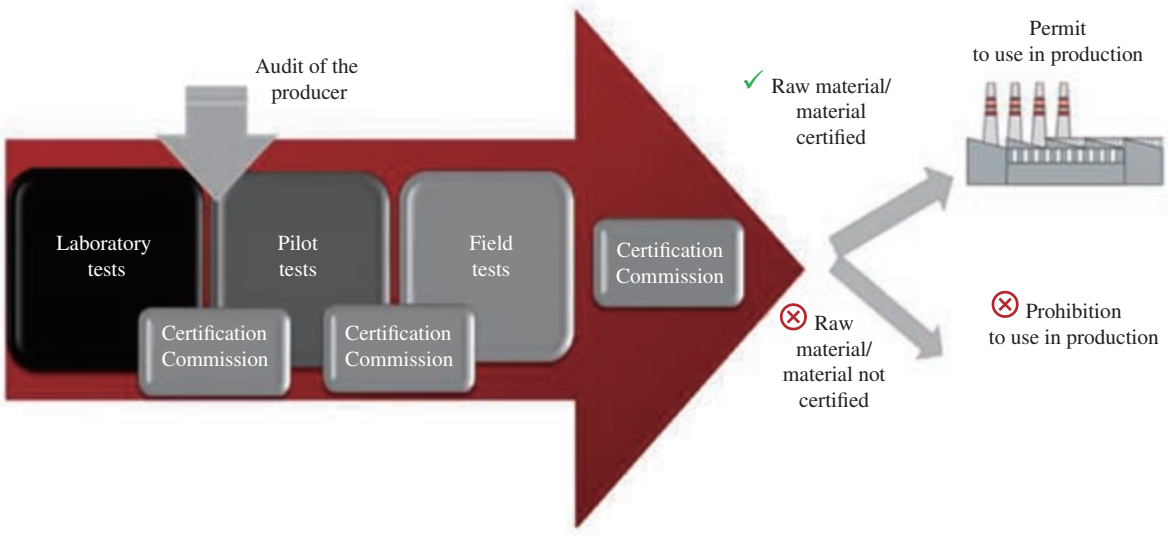
The transparency of procurement procedures is monitored through online monitoring of the Hotline and the Suppliers portal on the corporate site.

Supplier certification **HKEx Appendix 27 KPI B5**

In order to manage the quality and technological risks of the supply chain of the Company, the Company would conduct certification of its suppliers in accordance with the IATF 16949 requirements, with application approach APQP (PPAP). The certification of suppliers of raw materials and supplies for the production of the main products includes the following test stages: laboratory tests, pilot tests and field tests, as well as approval of the PPAP documentation package on supplier sites. Certification is meant to confirm the compliance of the quality of raw materials and supplies with the requirements of UC RUSAL, as well as to confirm stability of supplier processes by application of the QMS tools (SPC, MCA, Management plan, etc.).

After the end of the Reporting Period, in the first half of 2018 the Company has approved the Audit Regulations for Raw Materials Manufacturers, which provides the inclusion of social and environmental risk management tools in the supply chain

Certification stages



Audits

Audits of new/potential suppliers are carried out prior to the decision on the possibility of cooperation. Existing suppliers are also audited to ensure the compliance of the supply of the purchased products to the production requirements. The audits address the following tasks:

- assessment of production capacities, risk assessment (in terms of technologies used, quality, timing and volume of supply);
- confirmation of the ability of the supplier to supply products with parameters compliant with the Company's relevant requirements;
- reduction of the risks of supply of poor quality products;
- improvement of the reliability of suppliers;
- creation of a competitive environment for evaluating and selecting suppliers;
- supplier development.

A multifunctional team participates in audits: representatives of the technical service, quality assurance department, commercial service, aluminium smelters, etc. The audit process is standardised: a supplier audit control chart containing over 60 questions in the following areas is used:

- management of raw materials and supplies;
- organisation of production;
- production technology;

- management of finished products;
- quality management system;
- HR – qualification and training, rotation.

The audits ensure a score that is the basis for the organisation's approval for further cooperation and is taken into account in the selection of the supplier for procurement.

Scoring zones

Green	> 69	Future cooperation is recommended.
Yellow	55–69	Review of supplies downwards, repeated evaluation after the implementation of corrective actions
Red	< 55	Search for alternative suppliers to cover the quantity purchased

If the supplier does not fully meet the requirements of UC RUSAL (55-69%), the Company can provide support in the development of such organisations.

As a result of the audit, the Company provides a list of inconsistencies and validates corrective actions and presents to its suppliers. Audit results have a stimulating effect on supplier development: The Company helps to address the identified weaknesses and optimise processes that help them to certify their management systems and offer new perspectives. The partners may also be invited to participate in the Supplier Development Project within UC RUSAL Business System. After performing corrective actions, the supplier can be reaudited: if the risks are eliminated, the Company's score changes. A total of 59 supplier audits and 5 port audits were carried out by UC RUSAL in 2017.

Training of suppliers, partnership

As part of the development programs, UC RUSAL provides comprehensive training for internal and external suppliers in the following areas:

– QMS tools (SPC, MSA, and PPAP1 documentation)
– methods of solving problems 8D
– requirements of UC RUSAL to suppliers, cascading customer requirements further to suppliers

In the framework of joint work, improvements and optimization of requirements for incoming raw materials and suppliers are introduced on the basis of advanced world experience and scientific research of manufacturing enterprises (suppliers).

Supplier development in the framework of the Business System

One of the Company's priorities in the Business System is the development and training of suppliers. The projects are being implemented for this end aimed at:

- providing a comprehensive solution of the issues of poor quality supplies at the production facilities of UC RUSAL;
- improvement of the corporate certification system;
- improvement of the reliability of suppliers.

[21] Production Part Approval Process, P P A P - Procedure for approval of automobile components production.

Progressive tools and production methods are introduced through technology and raw material integration with the Company and the introduction of quality management standards. The projects also assist in the implementation of the principles and tools of the Toyota Production System (TPS), including training of specialists directly at the production facilities of the suppliers.

Key suppliers of raw materials and supplies for the production of the main products have joint projects to improve overall efficiency, reduce costs without losing quality, shorten the time of performance of the works, etc.

Transportation and logistics

One of the areas of work is the improvement of the efficiency of transportation and transhipment services. As part of the logistics optimisation project, the supply chain is analysed from the time of acquisition of the raw materials to the receipt of the products by the final consumers.

Russian and foreign ports are audited to preserve the quality of the products in transit, to reduce the stocks of finished products in ports and the time of metal turnover from the smelter to the export from the Russian port. The conditions of storage and handling of the products during storage and loading are analysed, as well as the economic indicators that characterise these processes.

In 2017, the audit of five ports, including three overseas ports was conducted.

Service providers developed corrective action plans based on audit findings, improved scheme for loading products. As a result of the audits, work is also being done to improve the reliability of the packaging of finished products.

Supplier rating

Based on the results of the work for the year, the Company performs the Rating assessment of the suppliers of the main raw materials and supplies, and represents an assessment of the work of existing partners during the period of cooperation with UC RUSAL. The assessment is formed on the 100-point system and is based on the application of the criteria:

- quality of products delivered;
- supplier quality management system;
- logistics operations;
- costs;
- supplier loyalty

According to the number of points earned, the supplier is assigned a category that must be considered when selecting suppliers for furture procurement. The Company prepares and delivers to the partner a letter explaining the results.

Score	Category/ Qualifications	Recommended actions
81–100	Category A Reliable	In case of the initial evaluation or the positive dynamics, a corrective action plan is not required from the supplier. In case of negative rating dynamics, the joint work with the supplier to develop a plan of corrective action is organised.
61-80	Category B Conditionally reliable	Joint work with the supplier is organised on the development of a corrective action plan with the aim of achieving category "A". Supplier's site audit to verify the effectiveness of measures implemented is conducted.
Up to 60	Unreliable	Downward revision of the scope of products ordered Joint work with the supplier is organised on the development of a corrective action plan with the aim of achieving category "B". Additional audit to assess the current status of supplier's QMS and audit on the implementation of a corrective action plan to verify the effectiveness of measures implemented is organised.

According to the evaluation of suppliers in 2017, 80% of suppliers received category A, 20% of suppliers received the category B.

Achievements in 2017

In 2017, a full set of documentation on interaction with suppliers was developed in accordance with the requirements of IATF 16949. A rating assessment of the suppliers of the main raw materials and supplies was implemented; the Quality Agreements with suppliers were put into effect, System claim work in 8D format was organised with internal and external suppliers of UC RUSAL.

Three joint projects were implemented with the existing suppliers of raw materials (anode blocks, aluminium fluoride, master alloy) aimed at eliminating losses and reducing the cost of purchased products.

Training of two suppliers on the principles and philosophy of the Business System, identification of losses, and development of plans with partners to address them was conducted.

Plans for 2018

In 2018, 36 audits of suppliers are planned, 3 projects for the organisation of the supply scheme for anode blocks in containers are to be implemented, two suppliers of aluminium fluoride are to be audited to reduce losses and additional labour efforts for transportation.

As part of the QMS advancing, it is also planned to continue work on the implementation of the IATF 16949 supply chain requirements, implement supplier development programmes, and create a base of reliable, stable partners.

Starting in 2018, the development and implementation of a unified IT-system of relationships with suppliers of SRM will be conducted.

As part of the QMS improvement, it is also planned to enter into quality agreements with suppliers, establish a production approval procedure (PPAR) basis for RUSAL suppliers, and continue the implementation of IATF 16949 requirements for the supply chain.

Requirements for suppliers in the area of health and safety **GRI 414-1**

A special area of interaction with the providers of services and works is health and industrial safety. The existence of risks in this area at the production facilities of the suppliers is considered by the Company a critical factor influencing successful cooperation.

Compliance with health and industrial safety standards is enshrined in service contracts. They are similar to the requirements for their own production facilities and for UC RUSAL employees. In case of violation by contracting organisations of the terms of the contract, they will be subject to penalties or even termination of contract. **HKEx Appendix 27 KPI B 5.2**

The main criteria for the assessment of contractors are as follows: qualification, provision of personal protective equipment, availability of skills for safe conduct of work.

The Company is conducting an investigation into all of the incidents. The injury rate among contractors' employees is based on the requirements of the corporate regulation on single reporting on health, industrial and fire safety. **HKEx Appendix 27 KPI B 5.2**

Health and safety services of UC RUSAL provide assistance to suppliers in order to improve compliance with Company requirements. To this end, the following activities are carried out:

- training in health, industrial and fire safety, first aid;
- preliminary and regular medical inspections;
- conducting production monitoring of working conditions;
- conducting of special assessment of working conditions;
- repair and construction work (as part of control of HSE compliance);
- transport;
- development of internal HSE regulatory documents;
- performance expert reviews of industrial safety;
- provision of personal protective equipment and working cloths, washing and mending.

In 2017, there were 6 fatal accidents involving contracted workers.

The increased control of the safe performance of works by contracting organisations is part of the corporate Plan for the reduction of injuries in 2016-2017. *For more information, please see Work Safety section.*

To this end, the instruction has been issued 'On the strengthening of supervision of the work of contracting organisations in the area of health and industrial safety', in accordance with which routine checks of the compliance with labour protection requirements of contractors are carried out. **HKEx Appendix 27 KPI B5.2**

Interaction with consumers

UC RUSAL mainly produces aluminium and alloys from which the customers are producing the final products. The main consumers of UC RUSAL are companies from Russia, Europe, America and Asia.

One of the Company's strategic objectives is to develop a long-term relationship with consumers by actively participating in the development of their new products, offering a wide variety of alloys tailored to the specific needs of each client.

Management approach

UC RUSAL seeks to maximally comply with customer needs and reduce the number of claims by using various tools and techniques. **HKEx Appendix 27 KPI B6**

In order to identify customer needs, the characteristics of their production and development priorities, the Company sends teams of representatives of production and service units to the production facilities of its customers. The production facilities of the Company regularly undergo on-site audits by customers to evaluate production processes and obtain recommendations. Key customers participate in joint trials.

The subdivisions of the Company develop a system of direct contacts with key Customers to achieve the status of the Master of the Supplier in order to strengthen the RUSAL brand and build a successful partnership for the future.

The key processes for working with the Customers implemented within the framework of the RUSAL QMS are:

- Management of claim work in the format of solving problems G8D;
- Managing Customer Specific Requirements (CSR) for the product, process, and system;
- Implementation of Focus Improvement Programmes with key customers based on certified Perfect Manufacturing Processes;
- Customers feedback management, including tracking ratings from key customers and analysing the satisfaction index;
- Project management by APQP qualification of the product, process, and system.

In order to proliferate information about their approaches and results in the application of advanced production and environmental technologies and to interact with stakeholders and business partners, including buyers of metal products, equipment producers and suppliers of various materials, the Company sends its representatives to key international congress and exhibition events.

To improve the consumer claims management system and accelerate the introduction of the most popular products to the market, the Company develops direct interaction with representatives of consumers within the framework of focus improvement programmes. To do this, direct contacts are organised with a number of key consumers. In 2017, the expansion of contacts with customers continued and the corresponding corporate Regulation was approved.

Initiatives to support and increase customer satisfaction are being developed. A redesign of the process of investigation of claims is carried out on a regular basis, KPI of claim investigation have been changed, problem escalation scheme has been introduced, a pattern of escalation of claim-related issues has been also introduced. Approaches to investigating claims depending on the source of claims and on the expectations of consumers related to claims have been identified. These changes are reflected in the updated corporate standard 'Customer Claim Management'.

The indicator of 'Promptness of review of customer applications' is one of the key indicator for achieving the Company's objectives under the Quality Management System.

In 2017, one of the Company's production facilities (SKAD Casting and Mechanical Plant) received a warranty claim related to product safety. The claim filed by Ford of Europe was related to the presence of cracks in the two spokes of the wheel. A promptly conducted study showed that the defective product meets the technical requirements approved at that time with the consumer. The cause of the crack could not be detected using the accepted control methods. To eliminate the cause of the defect, the requirements for maintenance of moulds with mandatory record of results in the checklist have been tightened. A set of measures is being implemented, including installation of new non-destructive testing equipment. In 2017, the Company was in compliance with the relevant laws and regulations that have a significant impact on the Company relating to the health and safety of the products of the Company. **GRI 416-2 HKEx Appendix 27 KPI B6.1**

Analysis of customer satisfaction **GRI 417-1**

The main indicator of quality of Company's interaction with customers is the level of customer satisfaction. Studies have been conducted annually since 2004. A questionnaire is sent to the Customers containing 69 questions in 7 areas of interaction. The results of the study help to see opportunities for improvement and are taken into account in the development of future action plans.

Average total customer satisfaction remains high: 8.7 points on a scale from 0 to 10. Positive dynamics of the level of customer satisfaction with quality of metal and alloys is noted.

Among the questions raised by customers in the questionnaire in 2017, the most important are the following:

- efficiency of delivery (timeliness of shipment/delivery flexibility delivery schedule, early warning about delivery problems, provision of documents on delivery, etc.);
- physical condition of the metal delivered to the consumer (contamination, oxidation of the surface, breach of packaging, etc.);
- commercial conditions (prices, bonuses, payment terms, etc.).

General customer satisfaction level of UC RUSAL in 2013-2017

	2013	2014	2015	2016	2017
Overall rating */	8.1	8.0	8.4	8.8	8.7
Relations	8.3	8.2	8.7	9.0	9.0
Technical support	7.4	7.4	7.9	8.4	8.4
Product Quality	8.1	8.2	8.5	8.7	8.8
Commercial arrangements	8.1	8.1	8.6	8.8	8.7
Delivery performance	7.9	7.9	8.3	8.5	8.4
Business cooperation	8.1	8.0	8.5	8.9	8.9

*/ The maximum value for each area is 10 points.

Labelling products HKEx Appendix 27 KPI B6 (a) and (b):

The policies of the Group on privacy matters relating to the marketing of products are set in the regulations protection, storage, processing and transfer of personal data of the customers and employees; the Group is in compliance with the relevant laws and regulations that have a significant impact on the Group in relation to protection, storage, processing and transfer of personal data of the customers and employees

The finished products produced at the Company's operations are automatically labelled in accordance with the requirements of the state. The label includes a trademark or name of the producer, aluminium grade or alloy brand, melting number and other information. In 2017, save as disclosed, the Company was in compliance with the relevant laws and regulations that have a significant impact on the Company relating to the labelling of the products of the Company and there were no significant claims in connection with the labelling of the products. **GRI 417-2** There were 4 notifications of non-compliance of labelling, none of which was either affecting the safety and conformity of products or was a non-compliance with the laws.

- a slab with incorrect labelling – 1 notification;
- the information labelled on the bars did not correspond to the information in the certificates – 1 notification;
- illegible labelling – 1 notification;
- labelling errors - incorrect specified information on the ingots - 1 notification

Achievements in 2017

- **"Creation/development of Customer Relationship Management System":** Modules "Contacts", "Documents", "Claim management", "Customer orders/Technical specifications", "End-users", Reports, etc. have been developed and put into operation;
- **"Customer audits and technical visits of specialists to customers" are** implemented on a regular basis;
- **"Improving technical communications with customers":** is performed through focus improvement programmes. Technical consultants of the Sales Directorate work with primary aluminium and alloys consumers in all international markets.

Plans for 2018

- Development of the system "Customer Relationship Management" (completion of the "**Claims**" module, development and integration of new processes/functions, for example, "**Permission to reject**");
- Further improvement of technical interaction with consumers through the implementation of focused improvement programmes.
- In 2018, a number of projects are planned to be completed with OEM customers, such as BMW, Audi, Peugeot-Citroen, Renault-Nissan-AvtoVAZ, and APQP qualification of the alloy production process with the confirmed by clients Part Submission Warrant (PSW)).

4. STRATEGY AND SUSTAINABLE DEVELOPMENT

STRATEGY

UC RUSAL's development strategy sets the Company's main areas and targets until 2021. The development vector is aimed at strengthening the leadership position of UC RUSAL in the aluminium industry by improving production effectiveness, improving own energy base and access to competitive sources of electricity, and ensuring the production of aluminium with own raw materials. It is also an important task to ensure the transport security of the business by optimising the logistics system. The Company intends to strengthen its position in key sales markets, with particular emphasis on the Russian perspective market.

According to the strategy, the objectives of the Company are: **HKEx Appendix 27 KPI 10**

- maintaining the positions of UC RUSAL as one of the most efficient aluminium producers with the smallest carbon footprint.
- self-containment in terms of raw materials for full independence from third-party deliveries;
- carrying out R&D to improve production effectiveness, produce new types of aluminium alloys and products, and develop innovative technologies;
- increasing the flexibility of the production process to adapt quickly to changing market conditions;
- increasing the share of value-added products to maximise margins and improve customer service;
- increasing the share of sales in the key market for UC RUSAL – in Russia and other CIS countries;
- creation of new applications for aluminium products that stimulate metal consumption in Russia;
- launching in Russia, in conjunction with partners, of new processing capacities, primarily based on the existing infrastructure of the production facilities, where primary aluminium production has been discontinued;
- improvement of the environmental performance of the production facilities and further enhancement growth of cleaner production;
- energy security through access to competitive power supplies;
- ensuring business transport security by optimising the logistics system;
- ensuring optimal capital structure, increasing the liquidity of shares and further reduction of financial indebtedness.

One of the most important strategic objectives is to make the Company the most efficient and green producer of aluminium in the world (in terms of production and technology). To achieve this goal, the Company invests in research engineering (including the production of new types of alloys, the introduction of RA-550 cell and inert anode technologies, the development of new products) and the retrofitting of production capacities.

In the medium term, the Company intends to increase the share of value-added products in the structure of production (bringing it to 60%) and increase the sales of these products in key markets in Europe, Asia, and the United States. To this end, a comprehensive production development programme is being implemented, in the framework of which the Company intends to restructure the product portfolio, improve quality management system and UC RUSAL Business System. In the immediate plans of UC RUSAL leadership is the development of a new Company development strategy.

Another important task of UC RUSAL is to promote the demand for aluminium in Russia and other CIS countries. In order to increase the interaction between producers and consumers of aluminium, a combination of producers, suppliers and consumers of aluminium (Russian Aluminium Association) was established in Russia. Through its existing contacts, the Company actively cooperates with domestic consumers in a constructive dialogue with them, and works together to create new products and to find new uses for aluminium products. The Company, with the assistance of the Ministry of Industry and Trade of the Russian Federation, is implementing a programme to support domestic aluminium-consuming industries designed to stimulate import substitution.

UC RUSAL continues to make every effort to remain an effective and sustainable producer. This is achieved through continuous cost reduction and optimisation of supply, transportation and logistics. The programme of capacity rationalisation continues, with the mothballing of a number of production sites.

Despite the changed economic environment, strategic environmental priorities remain: investments are directed both at the maintenance of capacities and the technical retooling of production and, on a mandatory basis, at environmental protection.

In the area of environment and climate, UC RUSAL has the following objectives and targets: **HKEx Appendix 27 KPI 10**

- meeting air emission standards prescribed by laws of the countries of operation by production facilities of the Company by 2022;
- protecting the interests of the Company in the regulation of greenhouse gas emissions;
- establishment of closed recycled water supply systems for key production processes at the Company's production facilities by 2022;
- ensure safe disposal of industrial waste, its processing and use, taking into account technical capabilities and market needs;
- completely stop using the equipment and exclude waste containing polychlorinated biphenyls ("**PCBs**") by 2022;
- Fulfilment of obligations on reclamation of disturbed lands;
- by 2020, certify management systems at all production facilities selling products on the market for compliance with ISO 2020 standard;
- promotion of the creation of an advanced legal and regulatory framework for the protection of environment in the production of aluminium and alumina.

In addition, UC RUSAL plans to further retrofit production and certify its production sites of alloys, foil, powders and silicon in accordance with ISO 14001. UC RUSAL will continue to pay due attention to protecting the environment and improving energy efficiency.

All social programmes in the regions of Company's operation, such as the development of education, health, culture and support for social initiatives in cities and villages of operations, have been maintained.

Created and distributed value for the 2014-2017, USD million.[22] ***GRI 201-1***

	2014	2015	2016	2017
Created direct economic Value	**10,313**	**9,458**	**8,338**	**10,796**
Revenue	9,357	8,680	7,983	9,969
Financial income	30	23	19	21
Dividends from joint and associated companies	926	755	336	806
Distributed economic value	**9,870**	**9,616**	**8,753**	**10,509**
Operating costs	**8,230**	**7,084**	**6,922**	**8,261**
Cost of sales	7,223	6,215	6,070	7,183
Selling expenses	402	336	331	446
Administrative expenses	605	533	521	632
Salaries and other payments and benefits to employees	**1,007**	**761**	**756**	**915**
Wages and salaries	795	616	594	718
Payments for defined contribution pension plans	207	143	160	194
Payments for defined contribution pension plans	5	2	2	3
Payments to capital providers	**1,317**	**1,507**	**845**	**1,203**
Interest paid within financing activities	677	516	452	493
Repayment of the principal debt, net	640	741	143	411
Dividends to shareholders	–	250	250	299
Payments to states	**310**	**253**	**216**	**106**
Investments in communities	**13**	**11**	**14**	**24**
Charitable contributions	13	11	14	24
Undistributed economic value	**443**	**-158**	**-415**	**287**

Assets, liabilities and equity	**2014**	**2015**	**2016**	**2017**
Total assets	14,857	12,809	14,452	15,774
Net debt	8,837	8,372	8,421	7,648
Equity	2,237	1,391	3,299	4,444

Operating results, thousand tonnes

Indicator	**2014**	**2015**	**2016**	**2017**
Production of primary aluminium	3,601	3,645	3,685	3,707
Alumina production volume	7,253	7,402	7,528	7,773
Bauxites production volume	12,108	12,112	12,187	11,645

[22] According to IFRS consolidated financial statements for the years ended December 31, 2014, December 31, 2015, December 31, 2016 and December 31, 2017.

MANAGEMENT OF ASPECTS OF SUSTAINABLE DEVELOPMENT

Management approach

The work of UC RUSAL in the area of sustainable development and corporate social responsibility is based on best practices, international and Russian standards and principles, including:

- 10 principles of the Global Compact;
- 17 United Nations ("**UN**") sustainable development goals
- provisions of the Social Charter of Russian Business
- the concept of the Global Reporting Initiative (GRI) and international SASB standards;
- provisions of the International Standard ISO 26000:2010.

The Company's activities cover the main areas of corporate social responsibility and sustainable development in accordance with standard ISO 26000.

Management structure

The management of the sustainable development aspects is coordinated by the Board of Directors, the President, the Executive Committee, the functional units of the managing company and the relevant business units of the subsidiaries. **GRI 102-19**

Health, industrial safety and environmental issues are dealt with directly at the level of the Board of Directors in the context of the work of the relevant Committee.

The management bodies and the business units of the Management Company and subsidiaries are responsible for the development and implementation of policies and action plans on sustainable development aspects in accordance with their functions. Policies and major corporate documents are reviewed by the Executive Committee. **HKEx Appendix 27 KPI 10**

The responsibility for addressing economic, social and environmental aspects of sustainable development, as well as consultation with stakeholders, is exercised within the functions of the employees of the relevant services; the results are brought to the attention of top management under the existing corporate governance procedures. **GRI 102-20 GRI 102-21**

During 2017, ten meetings of the Board of Directors were held to decide on the strategic development of the Company, as well as on staff motivation, health and industrial safety, environmental protection and the development of the regions of operation. **GRI 102-34, HKEx Appendix 27 KPI para10**

The Business Partner Code establishes the principles observed by the Company in interaction with supply chain organisations. **HKEx Appendix 27 KPI para10**

Global sustainable development goals

On January 1, 2016, the official recording of the actions was launched to achieve the 17 sustainable development goals set out in the UN document 'Transforming Our World: The 2030 Agenda for Sustainable Development' ("**SDG-2030**"), supported by 193 countries of the world. Private business, from which considerable investments and meaningful actions are expected not only in its own business, but also at the international level, is important in ensuring the effectiveness of collective efforts. **GRI 102-13**

UC RUSAL implements approaches compliant with SDGs-2030 in its management of Company operations, as well as its participation in a number of international initiatives. **HKEx Appendix 27 KPI 10**

Global sustainable development goals - 2030	Content of activities
1. No poverty 2. Zero hunger	The Company promotes the employment of working population in significant regions of its operation. The international training programme for Jamaican students gives graduates the opportunity to get well-paid jobs. Taxes paid by the production facilities of UC RUSAL raise the revenues of local budgets. In the areas of residence of indigenous peoples, the Company's social investments improve the quality of life by providing access to water, electricity, health care and social services. The social infrastructure of towns and rural settlements is being developed.
3. Good health and well-being	The Company implements health and well-being programmes for staff members and their families, invests in the health infrastructure in the regions of its operation and enhances the availability of advanced health care for the local population. A large-scale international project is the medical centre in Guinea, which ensures research, diagnosis, treatment and prevention of infectious diseases, including high-risk quarantine
4. Quality education	A variety of training programmes are available to the employees of the Company to help them continue their lifelong education. Programmes of interaction with schools and specialised universities and the UC RUSAL to Russian Schools project help to make the content of education more advanced, and schools are provided with advanced teaching aids
5. Gender equality	The Company provides equal rights to men and women with regard to access to employment, remuneration, opportunities to hold managerial positions, etc. The Social Entrepreneurship programme for Russian regions supports business projects developed by women

Global sustainable development goals - 2030	Content of activities
6. Clean water and sanitation	The Company operates in a limited number of regions with arid climates or uneven distribution of drinking water supplies. Being aware that water is a valuable resource and its accessibility affects the health and social well-being of the residents, the Company finances the solution of these issues through social investment programmes. Programmes for local communities in Guinea, Guyana and Jamaica include the construction of water pipes and water treatment equipment. The creation of closed water supply systems at production capacities is one of the Company's strategic objectives
7. Affordable and clean energy	The largest investment of the Company was the BEMO project (together with RusHydro), which includes the construction of Boguchanskaya HPP, a source of clean energy. Jamaica is implementing a solar-powered irrigation system project. More than 90% of the aluminium production of UC RUSAL is covered of clean renewable hydropower
8. Decent work and economic growth	The Company carries out a responsible social policy with regard to its employees: their rights are protected by collective bargain agreements and agreements of the administrations of production facilities with trade unions. The wage system is transparent and exceeds the corresponding indicators in the regions of operation and the social package contains benefits and guarantees that are important for workers and their families. Special attention is paid to the safety and health of workers. The Company's activity contributes to the development of regions of operation through the procurement system and social investment programmes
9. Industry, innovation and infrastructure	The Company has considerable scientific and research potential and implements new technology solutions
10. Reduced inequalities	The Company provides equal opportunities for local residents in obtaining employment at its production facilities, and trains those willing to be employed
11. Sustainable cities and communities	Within the social investment programmes, projects have been implemented that are supported by the residents of nearby cities and towns
12. Responsible consumption and production	The Company works with the consumers of its products to increase the use of clean aluminium products. Aluminium can be 100% reprocessed without losing its unique properties. In addition, the Company strives to increase the share of recycled or reused waste
13. Climate action	The programme to reduce greenhouse gas emissions at the production facilities of the Company has quantified objectives. RUSAL is one of the initiators of Climate Partnership of Russia and a member of several international projects and initiatives to reduce the human impact on climate

Global sustainable development goals - 2030	Content of activities
14. Life below water	The production of the Company does not adversely affect marine ecosystems. Sea water is used only at KUBAL for cooling in the casthouses
15. Life on land	The Company works on long-term programmes aimed at the maintenance and conservation of biological diversity, cooperates with environmental organisations, including in environmental monitoring (including biodiversity monitoring) in specially protected natural areas within the affected zone of individual production facilities
16. Partnerships for the goals	The programme to reduce greenhouse gas emissions at the production facilities of the Company has quantified objectives. RUSAL is one of the initiators of Climate Partnership of Russia and a member of several international projects and initiatives to reduce the human impact on climate

STAKEHOLDER RELATIONS MANAGEMENT

Management approach

The Company seeks to accommodate the expectations of a wide range of stakeholders, including individuals or entities influencing, or directly or indirectly affected by, the Company's activity. The key stakeholder groups for UC RUSAL are: **GRI 102-40, HKEx para 6**

- shareholders and investors;
- customers and suppliers;
- employees and trade unions;
- federal and regional authorities;
- local communities.

The main documents regulating the relationship of UC RUSAL and the stakeholders are the Code of Ethics and the Business Partner Code. [23] The Company maintains effective channels of communication that meet the needs of stakeholders. *Please see the table below* on the methods of interaction applied on a continuous basis and the defined areas of interest. **GRI 102-42, HKEx para 6**

Participation in industry organisations and international initiatives

Being one of the largest producers of aluminium in the world, UC RUSAL takes part in a number of international organisations, including: **GRI 102-13**

- International Aluminium Institute;
- European Aluminium Association;
- China Nonferrous Metals Industry Association (CNIA);

[23] See code of ethics at: *http://rusal.ru/investors/corp_management/corp_kodex.aspx*.

- Russian National Committee for the United Nations Environment Programme (UNEPCOM).

The Company also participates in the Russian Union of Industrialists and Entrepreneurs (RUIE).

In addition, the Company participates in international projects and initiatives, including the environmental ones, which include: **GRI 102-12**

- UN Global Compact;
- Initiatives for responsible planning and management of aluminium;
- Carbon Disclosure Project (CDP);
- Carbon Pricing Leadership Coalition.

UC RUSAL became one of the initiators of a unique Russian initiative, the Climate Partnership of Russia. 21 Russian companies were members of the partnership.

The aim of the partnership is to encourage Russian companies to move towards more environmentally friendly ways of production, to work towards the introduction of balanced support measures that will ensure the cost-effectiveness of investments in green technologies.

The content of the initiative is in line with the objectives of the climate agreement reached at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change and Sustainable Development Goals – 2030 (for more details please see *http://climatepartners.ru)*

A Memorandum of Intent defining the objectives of creation and the principles of operation of the Partnership, as well as the Action Plan, were developed and adopted in 2016.

In November 2017, RUSAL representatives took part in the 23rd Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Bonn (Germany). Here, the Russian pavilion was operating for the first time - RUSAL took an active part in the business programme preparation. The programme of one of the days in the Russian pavilion - "Low Carbon Aluminium Day" - was fully developed by the RUSAL representatives and the organisations that are members of the Climate Partnership of Russia. Representatives of the Company told about the new brand ALLOW - low carbon aluminium and other projects aimed at minimizing the impact of production activities on the environment. (*See also section "Participation in activities under the UNFCCC"*).

Industry development

RUSAL is an active member of Aluminium Association of Russia which unites producers, suppliers and consumers of aluminium. The Association supervises more than 30 large-scale projects aimed at expanding the consumption of aluminium in Russia, increasing the share of domestic aluminium products in the domestic market and increasing the export potential of Russian aluminium companies. A programme to increase the demand for aluminium has been developed, which will increase GDP by 1% and create more than 20 new jobs. UC RUSAL became one of the initiators and participants of the Association and was joined by more than 60 companies and more than 20 partners – federal and regional authorities, regulators, all-Russia business and industry associations.

Regional development

The Company initiated the creation of a special economic zone for the processing facilities of Krasnoyarsk. Project objectives: the social and economic development of the Krasnoyarsk Territory, the development of the processing industry and the production of high value-added products, the improvement of the competitiveness of the aluminium industry in Russia, the creation of favourable conditions for new investments and high-tech production development, the reduction of investor risks, the creation of new jobs and the increase of exports. Parameters of the project of the special economic zone in the Krasnoyarsk region have been developed and it was named "Krasnoyarsk Technological Valley".

Here, conditions will be created for the launch of production facilities for the production of rolled products for aviation and shipbuilding, components for the automobile industry, products for the cable industry and construction industry, packaging, consumer goods, including sports goods.

17 projects of potential investors are being worked out, including those involving foreign companies. For nine out of 17 projects, the initial amount of announced investments is more than USD 400 million and it is planned to create 1.2 thousand new jobs.

In 2017, an agreement was reached on the creation of a production cluster in the Volgograd region. In the territory of the technological valley in Volgograd, high value added (extrusion) products and end-use products will be produced: building materials, automobile components, buildings and structures based on aluminium extrusion. The project is based on the previously reached agreements with the regional administration and the electricity supplier for the development of the Volgograd aluminium smelter production site, where it is planned to restart the reduction capacities, the production of baked anodes will be arranged and the production of aluminium pigments will be reconstructed. According to preliminary estimates, thanks to the launch of the Volgograd Technological Valley, 2-3 thousand jobs will be created. About 9.6 billion roubles will be invested in the production of primary aluminium and semi-finished products alone at the Volgograd aluminium smelter and about 2.7 billion roubles will be invested in the production of high value added products in the valley.

A similar concept is also planned to be implemented with the participation of RUSAL in Khakassia.

Participation in forums

Economic forums provide opportunities for interaction with business partners, and serve as sites for the discussion of issues of interest to the business community and public authorities. Every year, UC RUSAL participates in a number of major regional and federal events that discuss issues that have a direct impact on the sustainable development prospects of the country and the regions.

In June 2017, St. Petersburg Economic Forum hosted session Public-Private Partnership ("**PPP**") for Development: Mechanisms and Benefits", organised by Rospotrebnadzor (Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing) jointly with UC RUSAL. The then President of the Company, Mr. Oleg Deripaska, spoke about his experience working with Rospotrebnadzor in the hotbed of Ebola fever in Guinea and expressed the idea of creating a fund for financing development programmes in the field of fighting epidemics using the PPP scheme. The then Chief Executive Officer of the Company, Mr. Vladislav Soloviev also took part in the panel "Russian exports - global demand and priority areas".

In September, Mr. Oleg Deripaska spoke at the session "Pandemic preparedness as a condition for sustainable economic growth in the APR" which took place in the framework of the 3rd Eastern Economic Forum in Vladivostok. The President of the Company spoke in favour of creating an integrated system of interaction at the international level, helping in the shortest time to unite the resources of the state and big businesses to respond to such global challenges as the threat of pandemics. As a successful example, he described unique experience of cooperation and emergency response demonstrated by RUSAL and the state structures of the Russian Federation during the counteraction to the spread of the Ebola virus in the Republic of Guinea.

Interaction on environmental issues

UC RUSAL has extensive experience in interacting with the environmental community and other stakeholders on the issues of environmental protection. As mentioned above, the Company participates in a number of international initiatives.

As part of its cooperation with the UN Development Programme, UC RUSAL has identified quantitative targets for the reduction of greenhouse gas emissions. The Company also participates in the work of the International Aluminium Institute, including the reduction of greenhouse gas emissions and the rational use of energy.

UC RUSAL is the member of the Russian National Committee for the United Nations Environment Programme (UNEPCOM). UNEPCOM is a non-profit partnership of individuals and legal entities aimed at supporting the efforts of the civil society and employers to preserve the environment, improve the health of the population and sustainable development of the Russian Federation, as well as to contribute to the compliance with Russia's international obligations to the United Nations Environment Programme and other international organisations dealing with these issues. The Company intends to continue to work to improve its performance to meet the best international standards.

RUSAL regularly participates in the annual climate conferences of the UN. (*For more details see section "Participation in the activities under UNFCCC")*.

The Company continues to interact with the all-Russian environmental public movement Green Russia as part of the executed environmental cooperation agreement. The agreement is aimed at the formulation and implementation of environmental decisions, the enjoyment of citizens' rights to a secure environment, and the preservation of nature for future generations.

The information about the environmental programmes of the Company and the production facilities is regularly made available to the public as well as to regional authorities and local governments. *Please see more details in the Environment Protection Section.*

Organisation of interaction with stakeholders

Stakeholders/ Topics for interaction [24] 102-44 GRI, HKEx KPI B6.2, para 6	**Interaction methods GRI 102-43, HKEx KPI B6.2, para 6**
Shareholders and investors	
Performance Strategic business prospects Prudent risk management Corporate governance quality	• Presentations and conference calls by Company leadership to the investment community (at least once a quarter)
	• Publication on the corporate internet site of AGM agenda items (annually)
	• Meetings of Company leadership with analysts and investors, including through road show and industry conferences (at least 1-2 times per year)
	• Regular meetings with minority shareholders
	• Annual general meeting of shareholders
	• Financial and non-financial reporting (quarterly, annually)
Customers and suppliers	
Quality and reliability of product deliveries Access to bids and procurement, clarity and transparency of procurement procedures Nature of business relations Management of aspects of sustainable development	• Information on tenders and procurement plans (as required) • Annual consumer satisfaction survey (annually) • Meetings with customers, including industry conferences, technical seminars and mutual visits of production facilities (systematically, as required) • Supplier certification and development system (continuously) • Claims system: weekly review of customer claims (continuously) • Procedures for monitoring compliance with contracts (continuously) • Respond to customer inquiries about the Company's sustainable development activities (upon receipt)
Employees and trade unions	
Remuneration and social guarantees Working conditions Career development opportunities Respect for workers' rights	• Reports on the performance of the collective bargain agreement and the agreements in the area of work safety (annually) • Collective bargain agreement (once every 3 years) • Corporate mass media: magazine, social network (monthly) • Regular meetings with leadership and management (at least 1-2 times per year) • Management conferences (periodic) • Consideration of communications on the hotline (continuously) • Participation in the reputation study (annually)

[24] Topics of interest to stakeholders, identified within key business processes.

Stakeholders/ Topics for interaction [24] 102-44 GRI, HKEx KPI B6.2, para 6	**Interaction methods GRI 102-43, HKEx KPI B6.2, para 6**
Federal and regional authorities	
Tax payment Regulatory compliance Contribution to the development of the regions of operation Creation/preservation of jobs	• Public hearings and consultations in the retrofitting and expansion of existing industries and construction of new facilities (as projects are ready) • Dialogue with State authorities on legislative and regulatory issues (continuously) • Joint projects (as required)
Local communities: town residents, non-profit organisations, small business, professional and creative organisations, etc.	
Development of the regions of operation Creation/preservation of jobs State of the environment in the locations of production facilities Grant support for initiatives	• Public hearings and consultations in the retrofitting and expansion of existing industries and construction of new facilities (as projects are ready) • Social and economic partnership agreements are made with a number of regional governments and municipalities. The duration of agreements differs in various regions of operation from one year to 3 years with annual renewal.

5. SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT

MANAGEMENT APPROACH

The strategic goal of UC RUSAL is to become the most efficient and environmentally friendly producer in the world. To achieve this, the Company invests in its own engineering and technology base, developing innovative technologies and products, and retrofitting production facilities. The results of the investments promote:

- increase of the share of value-added products;
- improvement of product quality;
- reduction of the energy intensity of production;
- improvement of environmental safety;
- enhancement of raw material self-sufficiency;
- expansion of product output

The scientific and technological activities of the Company are in line with the following sustainable development goals - 2030:

Goal 9: industry, innovation and infrastructure;

Goal 12: responsible consumption and production.

The Engineering and Technology Centre (ETC) of UC RUSAL is the main business unit of the Company in charge with scientific and technological development. It conducts research and development (R&D) and has successful experience in developing and implementing new technologies. Two design institutes carry out the planning of new construction and retrofitting.

ETC cooperates with leading Russian and foreign specialised universities and scientific institutes, which are developing new or adapting existing approaches and technologies to improve production processes and equipment.

In 2017, UC RUSAL and the leading Russian technological university National University of Science and Technology "MISiS" decided to establish the Institute of Light Materials and Technologies, and also entered into an agreement on cooperation in the development of innovative materials. The new institute will be the first Russian site to carry out research and development to create new materials for high-tech industries (aerospace, shipbuilding, automobile industry), development of additive technologies and metal matrix aluminium composites, and aluminium-based current sources (aluminium ion batteries). The institute will unite research departments, research and development sites, testing and certification centres. The Institute's laboratories will be equipped at the expense of RUSAL's and MISiS own funds. The Institute was created with the support of the Ministry of Industry and Trade and the Ministry of Education of the Russian Federation.

A number of projects is being implemented on the basis of co-financing by the state. In 2017, more than RUB 950 million were received in the form of subsidies and grants from the Ministry of Education and Science and the Ministry of Industry and Trade of Russia, with the implementation schedule by 2019. At the same time, in the Reporting Period, new projects received 160 million roubles, while additional revenues for projects opened in the previous period amounted to 270 million roubles. A total of 61 projects were under implementation. **GRI 201-4**

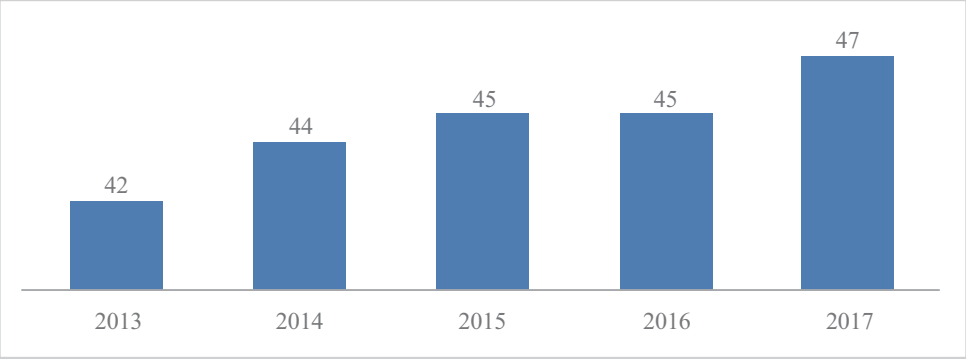
Production of value-added products

The increase in the share of value-added products (VAP) to 55% at the Russian production facilities by 2020 is one of the key strategic objectives of the Company.

UC RUSAL carefully adapts the product line to customers' needs and current trends in industry demand, continues to implement projects for the reconstruction and retrofitting of production facilities, and expands the range and quality of products.

In 2017, the volume of products with high added value amounted to 1,869 thousand tonnes or 47% of the total sales (44% in 2016). In 2018, the Company expects an increase in the share of value-added products to 50-52%.

Share of value-added products,%



Core businesses:

- development of the green aluminium product line;
- obtaining of new alloys and introduction of a technology for the production of slabs and billets for the production of aluminium bridges and aluminium railcars;
- development of new types of wire rod from aluminium alloys, including the production of enamelled wire;
- introduction/development of a technology for the production of slabs from aluminium-scandium alloys;
- search for technical solutions to increase the strength of the wire rod and billets, as well as to reduce the content of hydrogen and sodium in ingots.

In early 2017, procedure for the certification of aluminium hopper, unique for the Russian railways, was completed. The aluminium car is designed for the transportation of various bulk cargoes and as compared with analogues is characterised by corrosion resistance, higher load capacity and longer service life. Due to the combination of these advantages, the economy for transportation of one tonne of cargo on average is up to 10%.

In 2017, for the first time in today's Russia, pedestrian bridge was installed with the use of aluminium alloys in the Nizhny Novgorod region. One of the suppliers of metal for the production of aluminium structures was UC RUSAL. The bridge has high anti-corrosion properties, low operating costs, minimal installation time and a long service life.

Innovations in aluminium production

The Company conducts research and development and introduces new technologies and processes that help to solve the tasks relevant for the aluminium industry. At the same time, the Company's specialists are guided by the precautionary principle, comprehensively assessing their potential danger to the environment or human health, **GRI 102-11**

Reduction cell with inert anodes

As part of the main sustainable development objective to reduce the carbon footprint, the Company continues to test its own design and technology with inert anodes.

The production of aluminium with inert anodes excludes entirely the emissions of greenhouse gases and polyaromatic hydrocarbons and is characterised by lower material consumption. A line of green aluminium alloys has been developed, which can be produced using inert anodes characterised by elevated mechanical and operational properties.

Product tests were performed to select optimal technological process parameters, to test technical solutions intended to improve and stabilise reduction process indicators and to minimise cell maintenance operations. Product tests were carried out with the Company's customers. The tests are carried out on experimental group of cells.

Superpower cells

The introduction of RA-550 superpower cells contributes to the task of reducing the energy intensity of aluminium production.

In 2017, the RA-550 cell was totally launched at the Sayanogorsk Aluminium Smelter. The results correspond to the design parameters, and in some respects surpass them. The main advantage of this type of cells developed by the Technical Directorate is high energy efficiency. RA-550 consumes by 10-15% less power than previous generation cells. New technical solutions to remove gas from the cell will improve eco-efficiency and reduce the volume of wastes from major repairs by over 30%. Distinctive feature of the new equipment is lower electricity consumption and the best environmental indicators among all companies of the industry.

PROCESSES AND PRODUCTS

R&D projects contribute not only to the production of high value-added products, but also to a more rational use of natural resources and improved environmental safety.

Waste

The Company is testing the technology for the processing of red mud, the waste of alumina production, which contains valuable metal oxides, including scandium. RUSAL has the largest reserves of this expensive metal in accumulated red mud (estimated at 32.5 thousand tonnes of pure scandium). Reprocessing will eliminate the costly disposal of wastes that have a negative impact on the environment due to high alkalinity. Adding scandium to aluminium allows obtaining a material with unique properties (light, plastic and solid as steel).

At the Ural aluminium smelter, pilot production of scandium oxide from red mud is successfully operating. In 2017, we managed to achieve a significant decrease in product cost due to changes in production technology in the area of resource conservation. The goal for 2018 is to reduce this figure by 30%, and then to prepare feasibility study of the available plot development, or the construction of a new production facility at the Bogoslovsky aluminium smelter. RUSAL is planning to invest about 50 million roubles in this work.

Products

Increased output of value-added products is ensured by the development and production of new products, among others.

In 2017, RUSAL introduced a new brand of low-carbon aluminium - ALLOW. The carbon footprint of these products, taking into account the direct and indirect energy emissions of aluminium smelters, is less than four tonnes in CO_2 equivalent per tonne of aluminium produced, which is three times less than the average in the world. The new brand reflects the strategy of RUSAL aimed at using the principles of sustainable development in production, and the Company's desire to become the leader among aluminium producers with the lowest level of carbon footprint.

A number of new alloys have been developed jointly with customers from Japan and Europe. Studies in the field of casting production have made it possible to improve the quality of alloys by reducing the content of hydrogen and sodium.

Aluminium-scandium alloys

The projects for the development and production of aluminium-scandium alloys and master alloys can have a promising future because of the attractive properties for potential customers (strength, corrosion resistance, etc.). The Company sees great potential of using scandium alloys in the aerospace, transport and energy sectors.

The Company implements two key projects in this area:

- production of aluminium-scandium master alloys for the modification of aluminium alloys ensuring a two-fold increase in the level of strength characteristics, while maintaining high corrosion resistance and weld ability;
- production of aluminium-scandium alloys in the form of wire rod, flat and cylindrical ingots for the production of products used in shipbuilding, aviation and missile technology;

The pilot experimental section on the technology for the production of aluminium-scandium master alloy was assembled and put into operation. Attestation of consumers was successfully completed and the first batch was shipped. On the basis of pilot production, other types of master alloys will be processed.

In 2017, the industrial technology for the production of slabs and deformable semi-finished products was successfully tested, it ensures reduction in the cost of products by more than a half as compared with existing aluminium-scandium alloys while maintaining high consumer characteristics. Work is underway to certify the products received from consumers in the aerospace industry.

Powder metallurgy

In 2017, RUSAL began research in the field of additive technologies. And although the global market of powders is small and for now is estimated at tens of tonnes, this trend is developing at a rapid pace. The Company is actively working in this area, including with the attraction of the state grants. Powders for 3D printing, which have significantly better performance characteristics than the raw material on the market, have already been developed. These products are being tested by consumers. Work is underway to develop a new atomiser, unit for the production of metal powders for additive technologies.

Energy efficient equipment for the production of wire rod

Irkutsk Aluminium Smelter put into commercial operation a unit for the production of wire rod from aluminium and aluminium alloys, which allows combining two technologically complex process. In 2017, we started production of wire rod for use in electrical engineering made from 1350, 1370, Al-Zr, 6101, 6201 alloys and wire rod for welding wire made from 3003, 4043 and 4049 alloy. In 2018, activities that will ensure expansion of nomenclature of wire rod production from the solid grades on the basis of Al-Mg system will be implemented.

Materials and processes

Alumina production

The development of a new technology of alumina production from non-bauxite ores in Siberia continues. On the site of the All-Russian Aluminium-Magnesium Institute in St. Petersburg, a mini-mill was launched - a physical model where the technology for obtaining alumina from the coal clay was finally worked out: metallurgical grade alumina “Sandy” was produced and operating costs were confirmed. The next step will be the construction of a pilot production facility at Achinsk Alumina Refinery. The project opens the prospect for developing large reserves of Siberian ore and obtaining high-quality alumina directly next to the production facilities. In addition, with the same energy consumption, aluminium chloride method allows for a nearly three-fold decrease in fuel consumption and total energy consumption, as well as emissions of carbon dioxide compared with the nepheline processing.

Ore enrichment

A technologically sound and economically viable way of enriching poor ore from Goryachegorsk has been obtained. With the new method, the output of the concentrate exceeds 75%. In terms of the content of useful components the concentrate exceeds the quality of the ore of the Achinsk Alumina Refinery produced on the Kiya-Shaltyr field. In 2016 pre-design study was carried out with respect to switching of the Achinsk Alumina Refinery to the new raw material base, the national standard is being developed and a licence for subsoil use is being obtained. Therefore, prospects were opened to extending the life cycle of Achinsk Alumina Refinery by 50 years after exhaustion of the Kiya-Shaltyr Nepheline Ore Deposit (2028-2030).

Key retrofitting projects

Project/Production facility	Outcome/benchmark
Production of metallurgical products	
Production of value-added products	
Krasnoyarsk Aluminium Smelter Construction of casting system for the production of slabs (completion of the project in 2018)	Organisation of new products production at the production facility - billets (up to 120 thousand tonnes per year), including those with large diameters - up to 457 mm, previously not produced by the Company. The technology for casting and soaking has been worked out, and experimental batches have been produced.
Kandalaksha aluminium smelter Putting into pilot operation of a complex of wire rod quenching furnaces in the framework of the retrofitting project for the casting department of the production facility. (the project is completed)	Production of quenched wire rod (6,800 tonnes per year) will allow cable production facilities of the Russian Federation to reduce purchases for imports.
Irkutsk Aluminium Smelter Line for the production of small ingots from the alloy (55 thousand tonnes/year) was retrofitted and put into operation	Improving the quality of casting alloys, meeting the needs of customers and maintaining the sales market of the Company's products.
Sayanogorsk Aluminium Smelter Commissioning of a casting complex with the capacity of 120 thousand tonnes per year. (project is completed)	Obtaining an innovative product (casting alloys in the form of 10 kg of bar).
Introduction of a complex for the purification of aluminium from alkali metals and carbides. (project is completed)	Requirements of leading consumers for the purity of metal are provided for, production of flat ingots has increased by 20,000 tonnes per year.
Upgrading the process computer control of soaking pits. The equipment has been commissioned.	Increase in the production of billets by 9 thousand tonnes per year.
Reduction of Costs and Production Efficiency Growth	
Bratsk Aluminium Smelter Production and installation of units for the heating up and filling of cathode block assembly with cast iron (completion of the project in 2018)	Lower energy consumption of aluminium production by over 100 kWh/t
Sayanogorsk Aluminium Smelter Retrofitting of the electrode shop for the production of anodes with grooves (project is completed)	Reduction of electricity consumption by 120 hWh per tonne of aluminium;
Volgograd aluminium smelter Arrangement of the release of up to 104 thousand tonnes of baked anodes a year (the project is in the final stage).	Reducing dependence on foreign supplies

Project/Production facility	Outcome/benchmark
Production of metallurgical products	
Reduction of Costs and Production Efficiency Growth	
Achinsk Alumina Refinery The project on transferring sintering kilns No 11, 12 to the use of brown coal was completed. An advanced mill complex has been launched, it ensures coal grinding.	Increase in raw material independence, increase in the share of use of brown coal in the coal dust fuel of sintering kilns. For the first time in Russia, two kilns were transferred to the 100% use of brown coal.
Increase in production	
Irkutsk Aluminium Smelter Project of amperage increase of the potline no 5 up to 330 kA (completion of the project in 2018)	Additional production of 6 thousand tonnes of aluminium per year
Volgograd aluminium smelter A project is underway to launch two potrooms; in 2017, 117 reduction cells were repaired and put into operation (at the final stage).	Resumption of aluminium production by an annual volume of 67.5 tonnes.
Alumina production	
Nikolaev Alumina Refinery Projects to increase alumina output (project is completed)	Increase in the production capacity of the leach area to 1.7 million tonnes of alumina per year and that of alumina by 145 thousand tonnes/year
Urals aluminium smelter Production expansion project. A new autoclave train was built, aluminate liquor heat exchangers and heat exchangers for cascade cooling of hydrate slurry were put into operation (project is completed)	Increase in annual output of alumina to 900 thousand tonnes/year (by 130 thousand tonnes)
Bogosovsk Aluminium Smelter Projects to increase alumina output (project is completed)	Increase in the annual output of alumina to 1,028 thousand tonnes (by 82 thousand tonnes)
Corundum production	
Boxitogorsk Alumina Refinery Production retrofitting: advanced crushing and concentrating equipment was installed (project is completed)	Output of products that meet the requirements of the export market. Increase in the output of corundum products to 79 thousand tonnes.
Calcined coke production	
Irkutsk Aluminium Smelter Launch of a retrofitted calcination furnace No 2 for the production of calcined coke for the production of calcined anodes (the project is being finalised).	Import substitution of calcined coke for Sayanogorsk Aluminium Smelter at the level of 72 thousand tonnes/year.

Project/Production facility	Outcome/benchmark
Powder metallurgy	
Powder Metallurgy - Shelekhov Installation of new powder production equipment for 3D printing (project is completed)	Increase in Company's profits of USD 0.7 to USD 0.9 million per year with additional production of a high margin product
Joint venture with Runaya Metsource LLP, India production of high-tech aluminium pastes and powders with a wide range of applications, including in innovative industries. In 2017, an agreement was executed to establish a joint venture in India. (production will start in 2018)	The design capacity of the production facility will be about 10 thousand tonnes of products per year.

Ecological results of new technologies and projects introduction

Technology	Result
A programme for the equipping of all production facilities with dry gas treatment centres has been developed and is being introduced.	The treatment plant absorbs up to 99% of the substances from the exhaust gases. The emissions of harmful substances to the atmosphere were reduced by over 30%
For the first time in the world, projects to reduce greenhouse gas emissions by reducing the frequency of anode effects have been developed and implemented	For the period 2008-2012, greenhouse gas emissions have been reduced by 14 million tonnes
Testing of technology of processing and ultra-dry storage of red mud	Extension of the life of red mud disposal areas and reduction of storage costs and environmental impact: mitigation of the risks of soil and groundwater pollution by alkali
Development and testing of revolutionary aluminium production technology using inert, carbon-free anode	The by-product of this technique is not carbon dioxide, but oxygen. Besides, the cell will be able to produce the same amount of oxygen as 70 hectares of timber.
Development of technology for obtaining green pitch from coal for the formation of anodes for the reduction area	Reduction of benz(a)pyrene emissions by 10-15 times to the minimum level
Development of the technology by the use of unformed cell lining materials. Technology of processing of carbon lining and flotation tailings	Improvement of the environmental safety of major productions

The Company is developing a digitalisation programme that will allow RUSAL to move to a fundamentally new level of development. The large-scale introduction of advanced information technologies will cover all areas of activity - from production to work with personnel. Digitalisation or end-to-end automation presupposes real-time availability of the entire array of operational information related to production, technological and other processes at various levels of management.

Plans for 2018

- Continuation of tests of aluminium reduction technology on inert anodes on a group of reduction cells, optimisation of the design of reduction cells and reduction technology with IA to achieve the purity targets for the aluminium produced and the specific electricity consumption.
- Driving up to the design indicators of RA550 superpower cells, achievement of the target energy efficiency, confirmation of environmental indicators and the design cell life.
- Conducting industrial tests of technical solutions aimed at reducing fluoride emissions in the aeration hood of the hull, carrying out environmental measurements to confirm the reduction of fluorine emissions to the level of the requirements of the volume of MPE.
- Projects will continue to develop new products and improve the quality of existing products.
- The main areas of the projects of retrofitting and development of the production facilities will continue to be relevant.

6. ENVIRONMENT PROTECTION

APPROACH

UC RUSAL considers that environmental activities are an integral part of production activities and participation in public sustainable development projects. In the development of natural resources and processing of mineral raw materials, the production sites of UC RUSAL are bound to have an impact on the environment. To minimise and compensate for this impact, the Company has undertaken to comply with legal and regulatory requirements for environmental protection, to participate in the solution of global and regional environmental problems and to search for innovative solutions. **HKEx KPI A1, A2 and A3.1**

UC RUSAL implements the principles of its environmental policy at all production facilities and continually develops and optimises the environmental management system.[25] The environmental management and environmental stewardship system provides for compliance with environmental impact standards as defined by local laws in the regions, where UC RUSAL carries out its production activities. **GRI 103, HKEx KPI A3.**

As an environmentally responsible company, UC RUSAL implements programmes aimed at reducing adverse environmental impacts and reducing the quantity of waste, while ensuring compliance with all applicable legal and regulatory environmental requirements.

The adoption of management decisions at all levels and in all areas of UC RUSAL operations is based on the following guiding principles:

- **risk management:** identification and assessment of environment risk levels, setting targets and planning work in the context of environmental risk management;
- **compliance:** commitment to full compliance with the requirements of the environmental legislation of the countries of operation and the voluntary commitments assumed in the area of environment protection;
- **prevention:** the use of the best available technologies and techniques to prevent pollution, minimise the risks of environmental accidents and other adverse environmental effects;
- **training:** organisation of education for the employees of the Company in the area of environmental requirements applicable to their activity in order to develop an understanding of their capabilities and responsibilities, as well as the implications for the environment when these requirements are violated;
- **interaction:** taking into account the views and interests of stakeholders, establishing environmental requirements for selecting of suppliers and contractors, and assisting them in meeting these requirements;
- **measurability and evaluation:** setting, measurement and assessment of environmental indicators, as well as the assessment of compliance with the environmental legislation of the countries of operation and the voluntary commitments undertaken in the area of environmental protection;
- **openness:** open demonstration of plans and results of environmental activities, including in the form of public reporting by the Company.

[25] *http://rusal.ru/upload/Rusal_eco_policy_rus.pdf*

The strategic areas of UC RUSAL in the framework of the environmental policy include:

- meeting air emission standards prescribed by laws of the countries of operation by production facilities of the Company by 2022;
- protection of the Group's interests in the area of greenhouse gas emissions regulation and reduction of their turnover;
- creation of systems of closed water recycling for the main processes of the production facilities of the Group by 2022;
- processing and using industrial waste based on the process capabilities and market demand. ensuring safe waste disposal;
- complete elimination of equipment and waste containing PCB by 2022;
- fulfilment of obligations on reclamation of disturbed lands;
- get ISO 14001 certification for all production facilities involved in product sales in the market by 2020;
- promotion of the creation of an advanced legal and regulatory framework for the protection of environment in the production of aluminium and alumina.

Among the significant environmental activities, the Company also emphasises reliable access to clean renewable energy sources and the commitment to the reduction of the carbon footprint. In the framework of these tasks, UC RUSAL has entered into long-term contracts with hydropower plants in Siberia, allowing more than 90% of aluminium to be produced using renewable and clean hydropower, as well as reducing greenhouse gas emissions.

Every year, UC RUSAL conducts an assessment of the status of implementation of the principles and approaches embodied in the environmental policy. The Company implements a strategy for the progressive improvement of environmental performance within the framework of the adopted technical policy:

- on new capacities, through the introduction of the most advanced technologies;
- on existing production facilities by:
    - retrofitting of the existing production cycle;
    - replacement of obsolete gas treatment equipment;
    - creation of closed recycling water supply system or the construction of advanced treatment facilities to avoid waste-water discharges without treatment, in case if closed recycling water supply systems cannot be created;
    - construction of advanced waste disposal facilities to ensure their long-term and reliable storage,
    - construction of capacities for the preparing of the waste for the consumer (e.g. crushing and screening equipment);
    - replacing and disposing of electrical equipment containing PCBs;

- restoration of the environment through the reclamation of damaged land and decommissioned waste disposal facilities;
- introduction of the best available technologies.

The best available technologies and techniques are used to prevent pollution, mitigate the risks of environmental accidents and other factors that adversely affect the environment. They are applied in accordance with the Technical Policy of UC RUSAL. **GRI 103** An information and technical directory of the best available aluminium production technologies was developed with the participation of specialists from the Company[26].

MANAGEMENT STRUCTURE

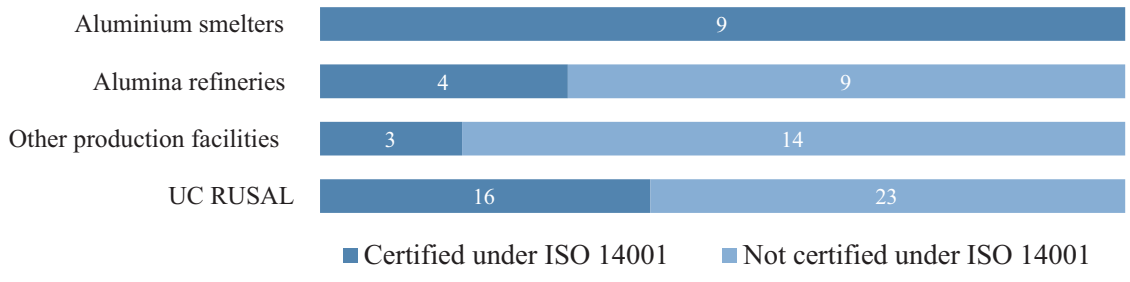
Environmental planning, monitoring and reporting at the Company level are carried out by the Health, Safety & Environment Department, which is part of the Technical Directorate. The Department includes the Health & Safety Unit, the Environmental Regulation and Control Unit and the Greenhouse Gas Emissions Control Unit. **GRI 103**

Operational management of the environmental issues of the production facilities (approval of objectives and budgets, financing of activities, control of receipt of permits, environmental risk assessment, etc.) is carried out by the environmental services of the divisions. At the level of the production facilities, specialised environment, health and safety departments carry out direct operational activities in the area of environmental protection. [27]

The Company constantly improves the environmental management system. In the Reporting Period, conformity of the corporate environmental management system to ISO 14001 international standard was confirmed until 2018 at 16 production facilities of UC RUSAL, including all aluminium smelters. By 2020, the Company plans to certify all production facilities that sell products in the market and do not have certification (foil mills of ARMENAL and Ural Foil, silicon facilities of Kremny (Shelekhov) and Silicon Ural (Kamensk-Uralsky). The Company is taking steps to adapt environment management system to the requirements of the new version of ISO 14001:2015, including:

- training of Company employees in the requirements of the new version of the standard;
- updating of internal regulations and procedures.

Compliance of the Company's operations with ISO 14001 standards



[26] Approved by the order of Rosstandart on June 29, 2016.

[27] Structure of the Health, Safety and Environment Department is described in section "Work safety, industrial and fire safety" of this report.

In October 2017, as part of the monitoring audit, DNV confirmed the conformity of the umbrella Environmental Management System (EMS) of aluminium and powder production facilities with the requirements of ISO 14001: 2015.

The activities of UC RUSAL in the area of environmental management and protection are carried out in accordance with the laws of the country of operation, with corporate regulations and procedures, as well as voluntary obligations. In the Russian Federation, UC RUSAL focuses primarily on the following environmental instruments:

- Federal Law No 7-FZ dated January 10, 2002 On environment protection;
- Federal Law No 96-FZ dated May 4, 1999 On air protection;
- Federal Law No 89-FZ dated June 18, 1998 On industrial and consumer waste;
- The Water Code of the Russian Federation No 74-FZ dated June 3, 2006;
- The Land Code of the Russian Federation No 136-FZ dated October 25, 2001;
- Federal Law No 52-FZ dated March 30, 1999 On sanitary and epidemiological well-being of the population;
- Federal Law No 416-FZ dated December 7, 2011 On water supply and sanitation;
- Federal Law No 261-FZ dated November 23, 2009 On energy conservation and efficiency improvement.

Environmental risk management is carried out in accordance with established procedures under the Risk Management Regulation. The identified inconsistencies in government oversight and voluntary audits are recorded and corrective actions are developed and implemented.

RUSAL seeks to comply with the environmental protection requirements of environmental legislation to the maximum extent possible. During the Reporting Period, the Company was in compliance with the relevant laws and regulations that have a significant impact on the Company relating to the air and greenhouse gas emissions, discharges into water and land and generation of hazardous and non-hazardous waste. Emissions into the air and discharges of polluting substances to water facilities, as well as the disposal of wastes, are approved in a manner that defines the limits of negative impacts. The Company also performs timely payments for adverse environmental impacts.

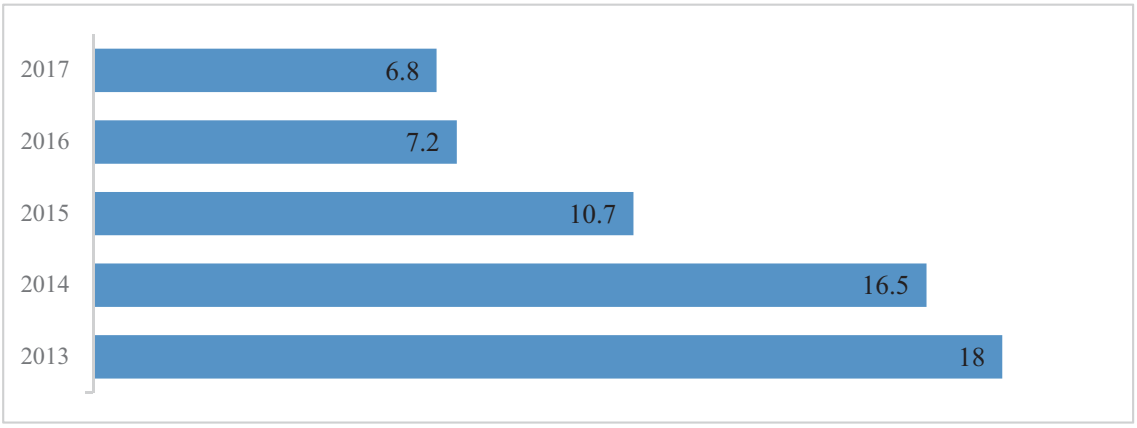
The identified inconsistencies in government oversight and voluntary audits are recorded. For discrepancies (detected violations) corrective actions are developed. In 2017, there were no significant violations of legislation that could lead to the emergence of risks for the Company's operations.

In accordance with the legislation of the Russian Federation, 'nature users' have to make environmental payments as compensation for the negative impact on the natural environment they cause, such as:

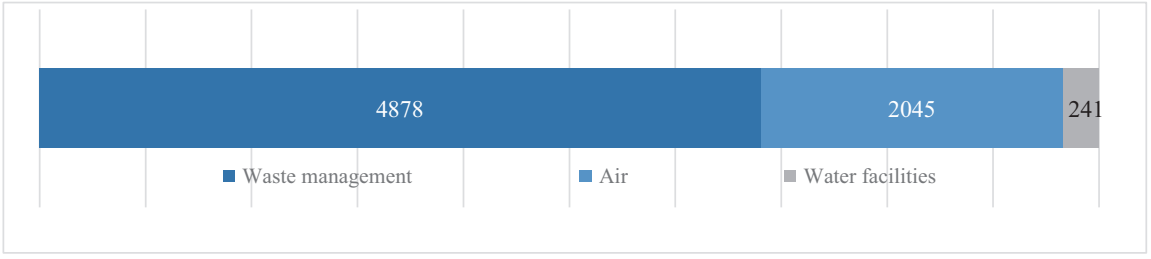
- emission of pollutants from mobile and stationary sources;
- discharge of pollutants into water bodies, both on the surface and underground;
- waste disposal.

The amount of payments depends on the degree of impact on the environment, i.e. on whether the nature user exceeds the permissible discharges and emissions of pollutants into the atmosphere; or whether the discharges and emissions remain within the limits (in excess of the established limits).

Environmental charges for environmental pollution, USD million **GRI 307-1**



Structure of environmental charges and fines for environmental pollution, USD.



In 2017, payments for environmental pollution fell by 5.6% as compared with the previous period, amounting to USD 6.8 million, mainly due to the introduction of new negative impact payment standards in the Russian Federation since January 1, 2016. In the expenditure structure, waste disposal payments account for the largest share – 67%, air emission charges amounted to 30%, and water facilities amounted to 3%. Environmental fines in 2017 amounted to USD 36 thousand.

There were no significant incidents connected with spills, air, water and soil pollution, as well as related significant fines and lawsuits.

LAND AND BIODIVERSITY

Restoration of damaged land and promotion of the conservation of biological diversity are part of the environmental strategy of UC RUSAL.

Since 2008, the Company has adopted an operational policy, 'Decommissioning of assets and restoration of environment: requirements for the organisation of work and assessment of obligations, **GRI 103**, setting:

- common corporate approaches and requirements for the restoration of damaged land;
- common rules on the assessment of obligations to decommission facilities and restore the environment.

According to UC RUSAL accounting policy, the expected cost of decommissioning of facilities and restoration of environment is reflected in the Company's international financial statements as reserves.

Land resources

***Approach* GRI 103**

Restoration of the damaged land is carried out by the Company in the following areas:

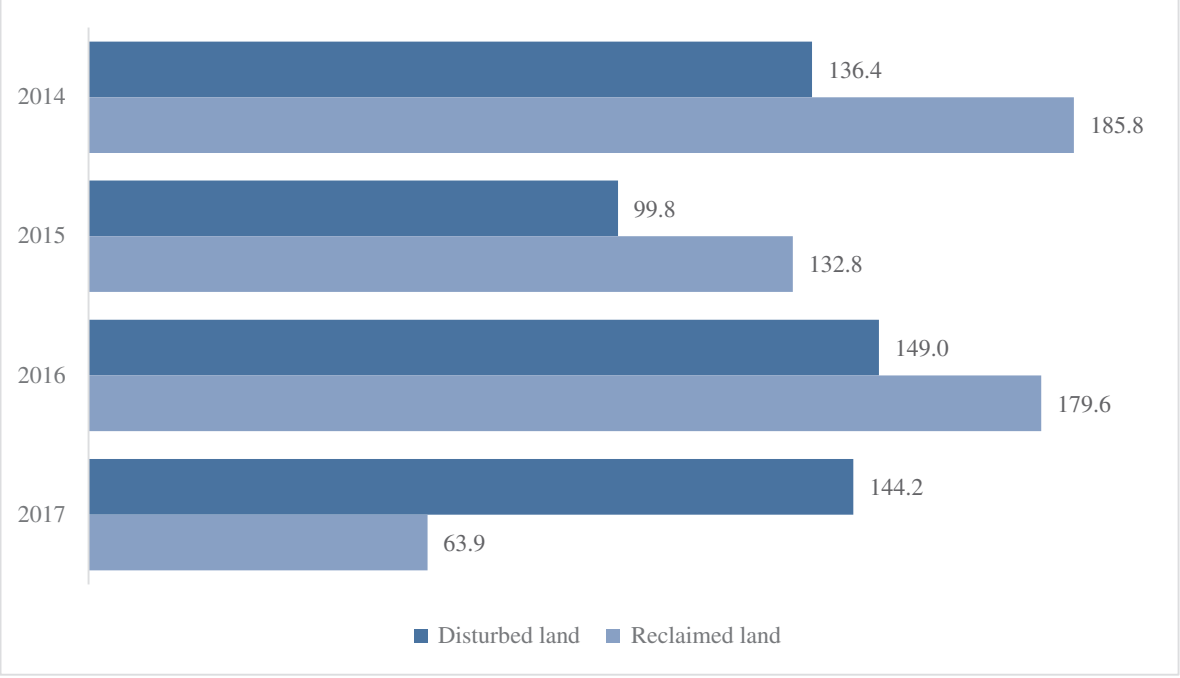
- restoration of damaged terrain and soil fertility after the completion of mining activities (open-cast and mines);
- reclamation of production and consumption waste disposal areas;
- remediation of damaged and contaminated land.

Results

In 2017, 22.21 million tonnes of overburden rocks were formed, of which 20.14 million tonnes were placed and 2.07 million tonnes were used. **GRI MM3**

In 2017, the area of reclaimed land was by 21% higher than the amount of developed land. The reclamation coefficient (the ratio of reclaimed land to disturbed) was 0.8. The total amount of disturbed land at the Company's production facilities has decreased from 6,906 ha in 2016 to 6,817 ha in 2017. Of these, the area of safe industrial waste disposal (mud disposal areas and industrial waste landfills) is of 3,530 ha (52%), the area of open-cast and waste dump is of 2,824 ha (41%), other areas requiring rehabilitation amount to 433 ha. **GRI MM1**

Ratio of disturbed and reclaimed land, ha



The obligations of UC RUSAL to decommission the facilities and reclaim land as at the end of the Reporting Period were estimated at USD 383 million (USD 382 million in 2016). Reclamation debt amounted to 433 ha (440 ha at the end of 2016). In 2016, 63.9 ha were reclaimed (179.6 ha in 2016). Change in the ratio of area of disturbed and reclaimed lands is associated with the development of deposits of the Middle-Timan bauxite mine (MTBM) in Russia and the Dian-Dian in Guinea.

- At the alumina refinery Aughinish Alumina in Ireland, the mud disposal areas are being reclaimed in full compliance with the requirements of the law. Red mud was compressed and drained, enriched by limestone and sand, loosened, ploughed, etc. Endemic plants were planted that formed the root system and are creating the soil.

- In the course of the development of the Vezhayu-Vorykvinsky deposit of the Timan Bauxite Mine (STBR), virtually all of the spent area of bauxite pits is filled with overburden rocks. This approach to reclamation reduces the area of the disturbed land.

- Windalco bauxite and alumina complex carried out active environmental work in the area of its operation. In the territories remaining after the development of bauxite deposits, which is conducted in Jamaica as open-cast, a large agricultural complex is created in Clapham (St. Ann). Twenty large greenhouses are built at the development site, in which local farmers will be able to grow in large quantities vegetables, spices and herbs. In order to provide the greenhouses with water during the dry season, the mining department of Windalco, together with contractors, constructed two reservoirs of 4 million litres each. The use of solar pumps is planned for the pumping of water during the drought season. Another Windalco project is being implemented in the vicinity of the town of Monig (St. Ann). Degraded land is rehabilitated there with the help of bamboo, which is planted in the abandoned pits.

- For several years, Sayanogorsk Aluminium Smelter has been undertaking research of the detoxification of fluoride in the soil. In the Reporting Period a survey was carried out in a 40-hectare test area in the environmental buffer zone of the production facility, after which the soil was fertilised and the perennial plants of melilot and lucerne were planted. These activities help to reduce the concentration of fluoride and improve the condition of the steppe soils filling them with useful substances. The test area will be monitored in the coming years. The Company commissioned a new map of the landfill of solid domestic and toxic industrial waste. The project complies with all sanitary rules and regulations and is constructed in compliance with all environmental regulations.

Addressing the issue of contamination of the area adjacent to the mud disposal of the Achinsk Alumina Refinery

While recognising the significant impact of Achinsk Alumina Refinery ("**AGK**") on the environment, UC RUSAL continues to undertake all necessary measures to improve the environmental situation in the area of the Achinsk alumina refinery.

Work to address the contamination of the area adjacent to the red mud disposal area of AGK is being carried out in accordance with the Programme for the rehabilitation of water facilities and land ("**PVR**").

In 2017, the following key measures of the Programme were undertaken:

- the reconstruction of water supply and wastewater disposal systems of the refinery, with increased consumption of treated wastewater, reduced consumption of clean river water and lower volumes of drains in the mud disposal system: works on the construction and start-up of a neutralisation unit for waste water from the chemical water treatment plant of CHPP with separate removal of acid and alkaline wastewater have been completed. The equipment has been commissioned.

- continuation of reconstruction of the mud disposal area with the removal of the treatment pond and the construction of the area No 3 with the film impervious membrane;

- decrease in the volume of drainage water of red mud disposal – preparation of area No 1 to preservation;
- completion of construction and commissioning to operation of a system for the interception of filtration water along the boundary of the red mud disposal areas, with the returning of the filtration waters of the mud disposal area to the recycling water supply system;
- cleaning of by-pass water drainage channel of the red mud disposal area from mud sediments;
- quality control of surface and ground water.

The implementation of PVR is planned until 2020. In 2017, the costs for the implementation of PVR made up 0.83 billion roubles, the amount used (as of December 31, 2017) totalled 5.8 billion roubles, total project cost of PVR (revised) amounted to 6.9 billion roubles.

Biodiversity

Approach GRI 103

The production facilities of UC RUSAL are located in different regions and countries of the world, while the main production capacities of the Company is in Siberia, which is an eco-region with unique flora and fauna.

The territories, in which UC RUSAL production sites are located, do not include or border the land of specially protected natural areas ("**SPNA**"). GRI 304-1

In compliance with the principles of sustainable development and provisions of the environmental policy, the Company works under long-term programmes to maintain and conserve biological diversity:

Since 2014, activities have been performed under the programme of monitoring of anthropogenic (man-made) impact on the forest ecosystems of the Stolby sanctuary in Krasnoyarsk. In Sayanogorsk, since 2011, the Protected Country National Fund has been carrying out activities under the programme of Environmental Monitoring (including biodiversity monitoring) of specially protected natural areas in the area of influence of the Sayanogorsk Aluminium Smelter. Employees of the National Park "Shushensky Bor" also carry out environmental monitoring in the impact zone of the Sayanogorsk Aluminium Smelter.

Results

For 15 years, the specialists from the Biology Institute of the Komi Science Centre, Ural branch of the RAS monitor the operation of the STBR. This is done by such methods as lihenoindication and bioindication, in which the main surveyed objects are the lichens and mosses that are particularly responsive to soil and air pollution. Monitoring of the state of terrestrial ecosystems, radiological conditions and fish stocks shows that the activities of STBR are carried out with minimal environmental impact. The trees in the STBR area can be classified as healthy. All moss and lichen species, including lobaria and vulpicida included in the Red Book, are preserved. The results of the monitoring allow seeing the reality to date and, accordingly, adjusting environmental activities and design decisions. Research materials are also a unique, regularly growing scientific database on the natural components of the north and the degree of their resilience to the impact of mining.

In the creeks of Chernaya, Vorykva, Vym Atlantic salmon and common miller's thumb, included in the Red Book of the Russian Federation and the Komi Republic, lay eggs. Data from the annual studies of the fisheries of the Vym river, which flows in the STBR area, confirm that the fish habitat is not distressed, the miller's thumb maintains its presence in the waters directly in the area of the man-made impact. There are young fish and Atlantic salmon producers in the monitored area of the upper current of Vym. This demonstrates the continued importance of this section of the river in the reproduction of the salmon population. Nevertheless, scientists note that the number of specimens of valuable and commercially important fish, including whitefish, has decreased several times due to the intensity of fishing in rivers. In June 2017, within the framework of the environmental campaign "Green Wave", the production facility "Boksit Timana" together with "RK" BioResurs" company released young whitefish in the Vym river, which will help maintain the population of this valuable commercially important fish.

The ecosystem, in which the largest European alumina smelter, Aughinish Alumina, is located was found to be the best preserved ecosystem in Ireland. According to a report of the National Parks & Wildlife Service of the Republic of Ireland about the nationwide study of semi-natural grasslands, the Aughinish peninsula, close to which the territory of one of the alumina refineries of UC RUSAL is located semi-natural grassland. These ecosystems are the habitat of many rare and protected species of plants, as well as invertebrate animals, birds and mammals. Despite the fact that Aughinish Alumina is the largest alumina refinery in Europe, the 400 hectare area of the peninsula represents a wide variety of rare plant distribution, including the two most rare in Europe, where Sanguisorba officinalis and other plants faced with extinction grow. **GRI 304-2, GRI 304-3**

Water resources

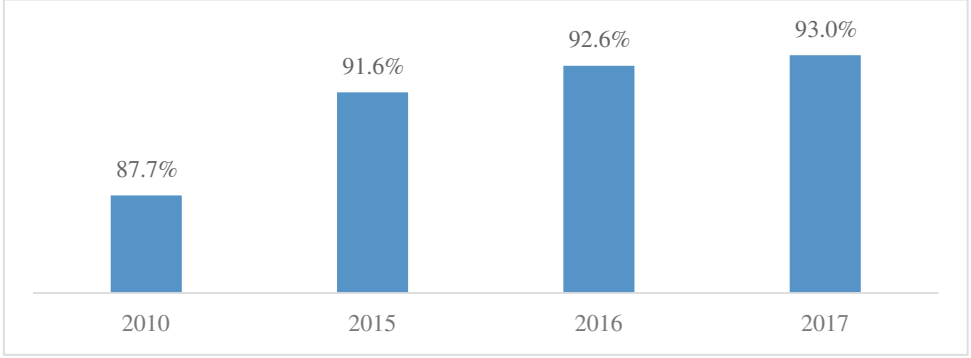
Approach

One of the Company's strategic objectives is the creation of a closed water supply system at production capacities that will reduce the need for water use and reduce wastewater discharged. **HKEx KPI A2.4, GRI 103**

Results

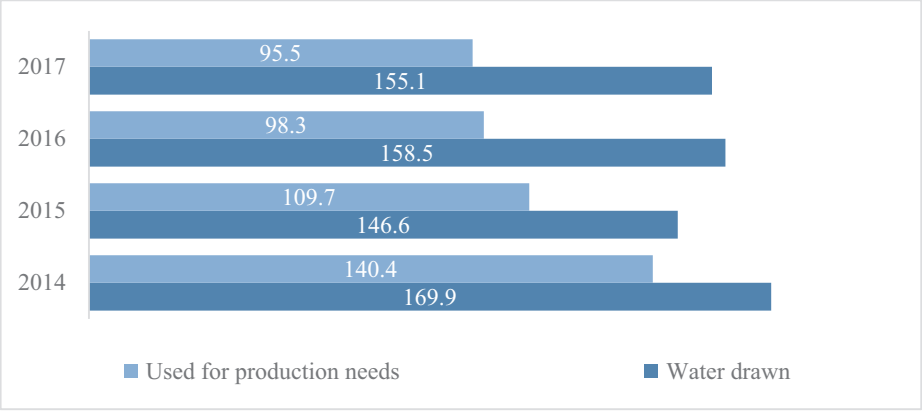
In 2017, the Company increased by 2% in the amount of water drawing compared to the previous reporting period. The consumption of water for production needs has also increased by 3% in relation to 2016. In 2017, the share of circulating and recycling water supply amounted to 93.0%, (in 2016 – 92.6%).

The share of circulating and recycling water supply

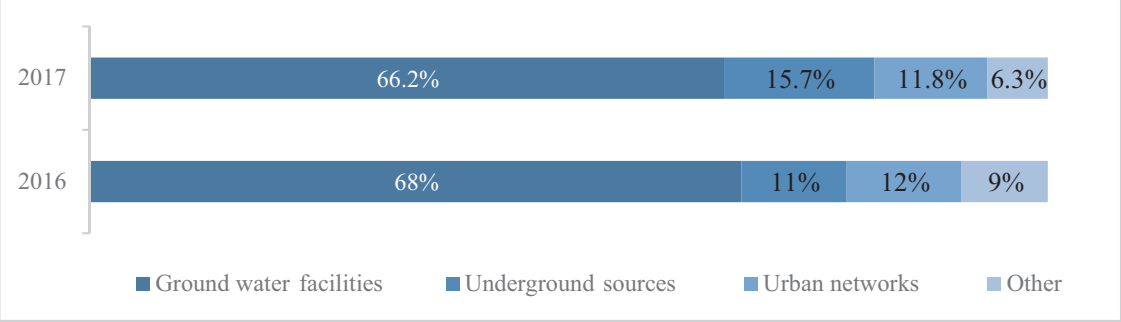


The introduction of closed water supply system at the production facilities has resulted in a decrease of 35% of the water drawn from river ecosystems in the last five years and a 68% decrease in wastewater discharges.

Trends in the drawing and use of fresh water for production in 2012-2016, million cubic metres [28] **GRI 303-1, HKEx KPI A2.2.**



Water drawn by source **GRI 303-2**

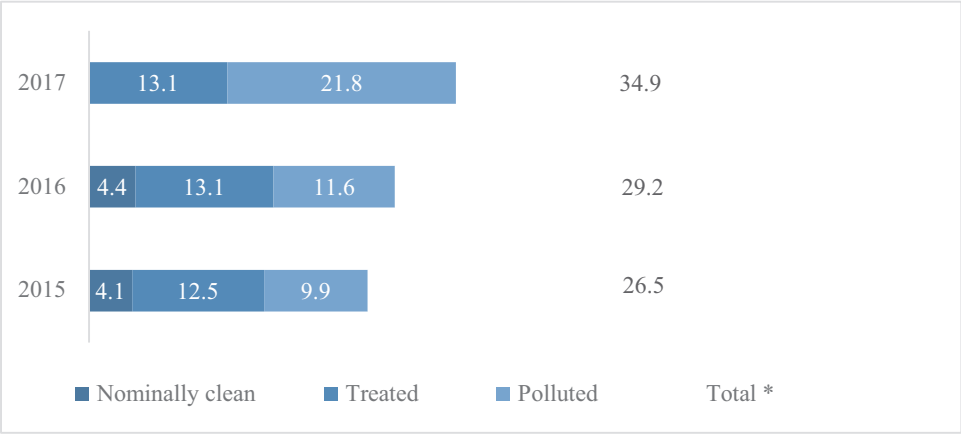


The structure of the Company's water consumption according to the types of sources used and the types of production facilities remains constant. There is no issue in sourcing water that is fit for purpose for production of the Group. Water is mainly drawn from ground water facilities, 66.2% of the total. The main consumers of water resources remain alumina refineries, related to the technological specificity of alumina production. The share of alumina division accounts for 75% of freshwater consumption across the Company. The share of aluminium production in the volume of water consumption in the Reporting Period was 16%. The intensity of use of fresh water for aluminium production is 4.8 cubic meters of water per each tonne of aluminium produced at the aluminium smelters, including 3.3 cubic meters of water per tonne used directly for production needs. The average intensity of use of fresh water entirely at the Company enterprises is 30.5 cubic meters of water per each tonne of aluminium produced, including 25.9 cubic meters of water per tonne used directly for production needs. **HKEx KPI A2.4**

There are no significant risks associated with water use.

[28] Hereinafter, data are given without taking into account the use of sea water, which is used only at Kubal facility for cooling at the casthouse (in 2017 - 22.9 million cubic meters). There is also no indication of data information on the Bauxite Company of Guyana and the Bauxite Company of Kindia (Guinea), where there are no water metering systems.

Dynamics of industrial wastewater discharges, million cubic metres [29] **GRI 306-1, HKEx KPI A1.1.**



In 2017, the dumping of industrial wastewater increased by 19% compared to the previous period, amounting to 34.9 million cubic metres. Most of these effluents are attributed to alumina refineries. Growth in 2017 is mainly associated with the completion of work to raise the water level on the mud collector No 3 in order to avoid the dusting of red mud from the mud disposal and the increase in precipitation during the year according at RUSAL-Krasnoturyinsk **HKEx KPI A1.5,-A1.6**.

Until 2020, the Achinsk Alumina Refinery is implementing a Programme of measures to reclaim water facilities and land.

Within the framework of the investment programme of Boksit Timana production facility, a new biological treatment station for household wastewater has been put into operation. The unit has a high capacity (up to 50 cubic meters per day) and uses the technology of complete biological sewage treatment. As a result, the water that gets into the environment corresponds to the standards of discharge into fishery water reservoirs.

In accordance with the requirements of environmental legislation, a number of operations are introducing a tool-based record of wastewater discharges. At the stack "Krasnaya Shapochka" (North Urals Bauxite Mine), project on metering devices installation is being implemented. Information from them will be fed into the accounting system in wireless mode. Water pumped to the surface by pipeline comes to the treatment plant where it settles and is filtered and then discharged into the river Saraynaya.

Energy consumption

Approach

With more than 90% of UC RUSAL aluminium produced using renewable and environmentally friendly hydropower, the Company aims to keep the lowest carbon footprint in the industry through energy efficiency activities.

---

[29] - excluding pit water discharge (discharge volume in 2017 - 156.5 million m^3, in 2016 - 143.5 million m^3) and marine water discharge (discharge volume in 2017 - 22.9 million m^3, in 2016 - 25.1 million m^3). Is not an important aspect (not involved in the production process) and is informative.

* - excluding BCGI, CBK, Friguia - these production facilities do not use metric systems.

Electricity is a key element in the production of aluminium, so the Energy Efficient Production programme has the highest priority.

Targeted programmes and energy efficient projects are implemented at all production facilities of the Company without exception.

Massive introduction of energy-saving technologies, energy savings are achieved through optimisation of power regimes, cells design and technical and process parameters of production, such as reduction of thermal losses, use of slit-type and oblong anodes, modification of regulations for technological operations, reduction of amperage, etc.

Scientific developments to reduce energy consumption can play a key role.

Results **HKEx KPI A1.5**

During the accounting period energy efficiency projects were successfully implemented at all smelters of the Aluminium Division. In the area of energy efficiency, at the three aluminium smelters – Sayanogorsk, Krasnoyarsk and Irkutsk – a project to implement the unified anode is implemented almost simultaneously.

The production facilities of the Company have achieved the following indicators of power consumption reduction:

Direct and indirect energy consumption for aluminium production by type of energy resource **HKEx KPI A2.1**

Type of energy resource	Metric units	Total consumption	Intensity, metric units per tonne of Aluminium produced
Aluminium production	tonne	3,823,573.98	
Natural gas	thousand cubic meters	12,548.33	0.0032818
Fuel oil	tonne	62,672.15	0.0163910
Coal	tonne	6.76	0.0000018
Brown coal	tonne	0.00	0.0000000
Diesel oil	tonne	6,752.52	0.0017660
Gasoline	tonne	209.91	0.0000549
Other	tonne	2,837.46	0.0007421
Electric power, including	megawatt hour	**62,430,524.38**	**16.3277930**
Hydro-energy	megawatt hour	60,239,212.97	15.7546874
Wind power	megawatt hour	387,069.25	0.1012323
Atomic power	megawatt hour	880,270.39	0.2302219
Thermal generation	megawatt hour	923,971.76	0.2416513
Fuel for heat, including:	joule	**2,306,102.07**	**0.6031274**
Coal	joule	2,202,782.62	0.5761057
Fuel oil	joule	103,319.45	0.0270217

Type of energy resource	Metric units	Total consumption	Intensity, metric units per tonne of Aluminium produced
Alumina production	tonne	6,933,987.14	
Fuel for technology		–	–
Natural gas	thousand cubic meters	699,602.55	0.1008947
Fuel oil	tonne	204,906.44	0.0295510
Coal	tonne	1,252,410.20	0.1806191
Brown coal	tonne	335,195.39	0.0483409
Diesel oil	tonne	22,456.55	0.0032386
Gasoline	tonne	357.16	0.0000515
Other	tonne	42.83	0.0000062
Fuel for the production of consumed own electric power and heat		–	–
Natural gas	thousand cubic meters	1,700,886.49	0.2452970
Fuel oil	tonne	153,650.89	0.0221591
Coal	tonne	227.20	0.0000328
Brown coal	tonne	1,227,465.80	0.1770216
Diesel oil	tonne	1,243.00	0.0001793
Own electric energy	megawatt hour	**2,941,266.00**	**0.4241811**
Own heat	gigacalorie	**15,271,645.00**	**2.2024334**
Purchased electricity	megawatt hour	**519,147.00**	**0.0748699**
Purchased heat	joule	**0.00**	**0.0000000**
		Total intencity, Gjoule/t Al:	**33,6**

- As a result of the use of the unified anode at the Sayanogosk Aluminium Smelter, the decrease in the intensity of the energy consumption per tonne of aluminium was of 76 kWh in 2017 relative to the planned target for 2017; while as compared with 2016, the decrease was 44 kWh per tonne of aluminium. The production facility also has a pilot section of RA-550 section. It is planned to achieve the electricity consumption of less than 12,500 kWh per tonne over the next few years. The new reduction cells are operating with the amperage of more than 520 kA, which will reduce operating costs, primarily by improving environmental performance, increasing energy efficiency, and reducing labour costs for maintenance. **HKEx KPI A2.3**

- Irkutsk Aluminium Smelter: electricity consumption in 2017, relative to the planned target for 2017, decreased by 45 kWh per tonne of aluminium; on the 5th series - by 70 kWh per tonne of aluminium in 2017, relative to the planned target for 2017, and 116 kWh per tonne of aluminium relative to the fact of 2016. In 2017, the savings of the burned anodes was of 2,3 kg per tonne as per the planned target for 2017.

- At the Krasnoyarsk Aluminium Smelter the specific electricity consumption per tonne of aluminium dropped by 89 kWh in 2017, relative to BP, and 66 kWh per tonne of aluminium relative to the fact of 2016.

- Bratsk Aluminium Smelter reduced energy consumption for the production of a tonne of aluminium by 36 kWh in 2017, relative to BP, and 79 kWh per tonne of aluminium relative to the fact of 2016.

- Novokuznetsk Aluminium Smelter reduced energy consumption for the production of a tonne of aluminium by 151 kWh in 2017, relative to BP, and 147 kWh per tonne of aluminium relative to the fact of 2016.

The aim is to reduce the annual energy consumption of aluminium smelters by 3,400 GWh by 2020 as compared to the 2011 level.

All the production facilities of the Alumina Division also participated in the energy saving programmes. Each of them prepared organisational and technical plans to change the operating systems of existing equipment and to replace obsolete equipment with energy efficient, contributing to the savings in fuel and energy resources.

UC RUSAL production facilities continue to work on regular energy audits, the results of which serve as basis for the action plans for efficiency.

RUSAL is one of the developers and initiators of the introduction of the principles of price-dependent reduction of power consumption in Russia. This mechanism, which is widely used in the energy systems of the US, Australia, China and the EU countries, involves a change in the consumption of electricity and power by end-users regarding their usual load profile due to changes in electricity prices in exchange for incentive payments. This approach improves the reliability of the energy system, providing the system operator with an additional tool for regulating the balance of electricity generation and consumption. It controls prices in the capacity market being an alternative to building expensive generating or grid facilities needed to cover the loads under the conditions of increased consumption or decommissioning of worn out equipment.

RUSAL joined the Programme of price-dependent reduction of power consumption in 2017. The economic effect received in 2017 amounted to 67.08 million roubles.

At the parliamentary hearings organised by the State Duma Committee on Energy in October 2017, RUSAL presented its proposals designed to stimulate energy efficiency in Russia. According to the Company, in order to remove restrictions that hamper the development of energy conservation, legislation needs to be adjusted to reduce cross-subsidisation.

In particular, RUSAL proposes to release new energy-intensive and energy-efficient operations from payment of excess and unclaimed generating capacities, as well as various types of non-market extra charges.

During 2017, the overall effect of reducing electricity consumption amounted to approximately 5.8 million US dollars.

Air emissions

Approach

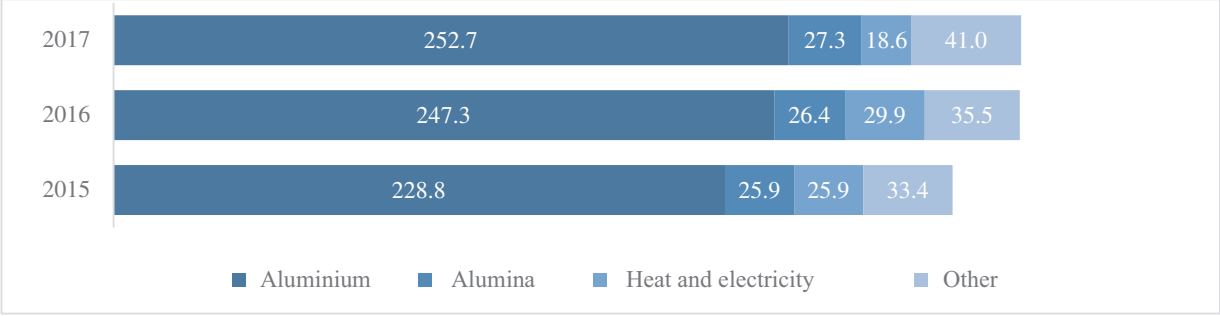
Following the environmental policy, UC RUSAL implements activities aimed at reducing the negative impact on the ambient air. **HKEx KPI A1.**

The objective of the Company is to achieve by 2020 air emission standards established by the law of the countries of operation of UC RUSAL production facilities.

Results

In 2017, total emissions of atmospheric pollutants were similar as the level of the previous period amounting to 339.6 thousand tonnes.

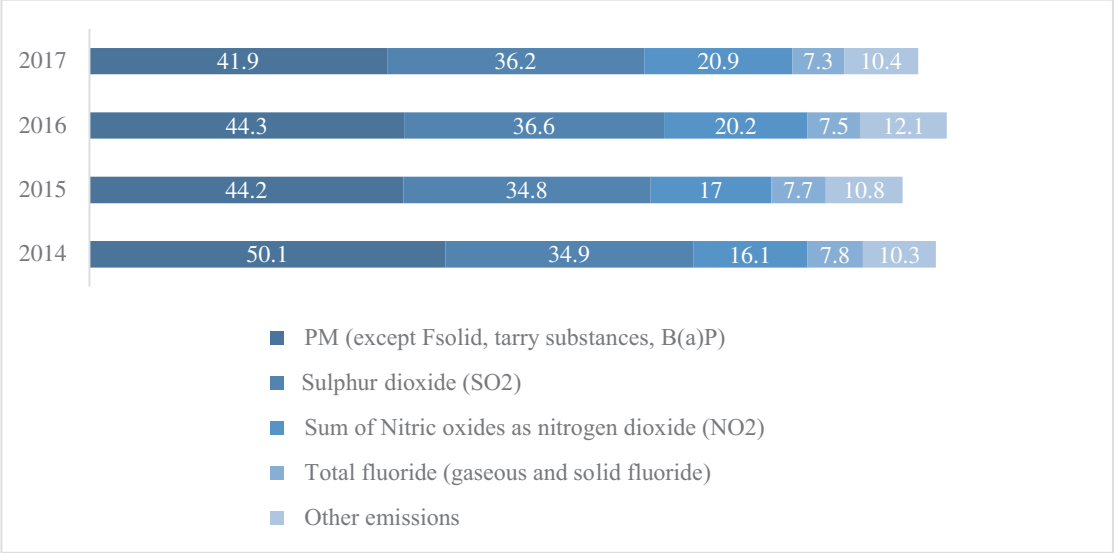
Emission trends by type of production (excluding greenhouse gases), thousand tonnes



The distribution of total emissions of pollutants by type of production remains unchanged – aluminium smelters account for the bulk of these. Their share remained at 74% during the reporting period. Alumina refineries, same as in the previous period, accounted for 8% of emissions, heat and power production for 5%. Other production (production of anodes, fluorinated salts, cryolite and others) ensured 12% of total emissions.

Among the pollutants emitted into the air by UC RUSAL production facilities, carbon monoxide emissions account for the largest share, which have the least significant negative impact on the environment. During the reporting period, this figure was of 222.9 thousand tonnes (218.5 thousand tonnes in 2016), or 65.6% of total Company emissions. Emissions of this pollutant increased by 2 p.p. compared to the previous period.

Emissions of pollutants into the atmosphere (without carbon monoxide), thousand tonnes **GRI 305-7, HKEx KPI A1.1.**



During the reporting period, aggregate emissions of other pollutants also slightly increased while maintaining the emission structure by type. Solid substances continue to hold the largest share (with the exception of benz(a)pyrene, solid fluorides, tarry substances) with 41.9 thousand tonnes or 12.3% of gross emissions, sulphur dioxide of 36.2 thousand tonnes or 10.7%, nitrogen oxides of 20.9 thousand tonnes or 6.2%, total fluoride (solid and gaseous) of 7.3 thousand tonnes or 2.2%, and other substances of 10.4 thousand tonnes or 3.1%.

Transition to the Green Soderberg technology

During the reporting period, the Company continued to work on the retrofitting of the gas treatment centre (GTC) and basic equipment of production facilities, including due to the transition to the new technology of Green Soderberg. **HKEx KPI A1.5, A1.6.** This technology, developed by the Company's specialists, provides for the improvement of the design of the cell, which ensures that its high sealing capacity. With constructive changes, the reduction cell is opened for routine operation only twice every six days. The rest of the daily operations are carried out without destroying the cryolite-alumina crust through special hatches. This leads to a significant reduction of emissions of gases into the atmosphere. The implementation of the Green Soderberg project continued at Krasnoyarsk, Bratsk, Irkutsk and Novokuznetsk Aluminium Smelters. Green Soderberg is a unique development by Krasnoyarsk specialists of the RUSAL Engineering and Technology Centre. It is included in the 'Guide to the Best Available Technologies in Aluminium Production' approved by the order of Rosstandart.

Krasnoyarsk Aluminium Smelter

About 70% of capacity of Krasnoyarsk Aluminium Smelter has already been switched to the Green Soderberg technology. Here, a section of two-stage gas treatment section with the production of sodium sulphate was put into operation. Own technology is superior to analogues for a number of characteristics: There is no discharge of liquid and solid wastes, and a higher degree of gas treatment is ensured. The efficiency of the technology is more than 99.5% for fluorine and 96.7% for sulphur. This will allow RUSAL to abandon the construction of new mud disposal areas at the Krasnoyarsk Aluminium Smelter, which will save up to USD 1,39 million per year, as well as cut maintenance costs for gas treatment equipment.

Irkutsk Aluminium Smelter

The production facility commissioned an experimental site where six retrofitted reduction cells operate using the Green Soderberg technology. Based on the results in this experimental area, we will decide on the rate of remaining 524 self-baking anode cells retrofitting. In the coming years, all of them must be retrofitted. Comprehensive retrofitting concerns treatment facilities as well: the production facility regularly replaces electrofilters, new gas treatment systems are being designed.

Bratsk Aluminium Smelter

Bratsk Aluminium Smelter has switched about 70% of one potroom to the Green Soderberg technology, and two series of potrooms feature a cutting-edge gas cleaning system.

BrAZ commissioned six new dry gas scrubbers and developed documentation for three more gas treatment plants that will each feature an additional foam unit for capture of sulphur dioxide.

In 2018, introduction of advanced gas treatment equipment will continue.

Novokuznetsk Aluminium Smelter

In the course of the retrofitting of the main production in portoom No 12 of the smelter, the experimental site was put into operation with six S8BME reduction cells working on Green Soderberg technology. With the new engineering solutions, the cell records a smaller consumption of primary types of raw materials and electricity. After the technology is mastered, the two potrooms will be converted to the reduction cells operating with Green Soderberg technology, the rest to the reduction cells with pre-baked anodes RA167. They will be connected to the latest dry gas treatment facilities. Retrofitting is planned to start in two buildings as early as in 2018.

The full replacement of the reduction cells and gas treatment capacities is planned for 2019-2020.

Retrofitting of gas treatment facilities

One of the main projects aimed at reducing the technological impact of metallurgical production on the environment is the introduction of advanced, highly efficient dry gas treatment. These GTC capture up to 99.8% of hydrogen fluoride and solid fluorides in the exhaust gases of the reduction area. In doing so, it is not only possible to reduce the gross emissions of the production facility but also to reduce the amount of waste from the gas treatment disposed at specialised landfills.

One of the main achievements in the Reporting Period was the development of a scrubbing system - GTC-RUSAL, developed by SibVAMI researchers in cooperation with specialists from the Technical Directorate, Engineering, Construction and Aluminium Divisions. In terms of quality and functionality, this system is in no way inferior to imported analogues, and in terms of reliability even surpasses them. This will allow fully switching to the use of gas treatment centres of own production in the future.

Gas treatment system "GTC-RUSAL" has successfully passed the tests at the Irkutsk Aluminium Smelter and is now being introduced at the smelter in Novokuznetsk.

Volgograd aluminium smelter

New gas treatment of the second potroom has been launched. The efficiency of catching harmful substances in the atmosphere is 98.8%. Gas treatment is being retrofitted in the fifth potroom of the smelter, a new GTC is being built for the bake oven at the anode plant.

Urals aluminium smelter

Krasnogorskaya CHPP, which was incorporated into the Urals Aluminium Smelter two years ago, has been converted from coal consumption to the consumption of natural gas as the main fuel. Coal will be used only as a backup fuel in the winter. Boilers operating on a gas-coal mixture are equipped with special devices - emulsifiers, whose gas treatment efficiency exceeds 98%. As a result of the transition to the use of gas, the concentration of pollutants in the atmospheric air of the city of Kamensk-Uralsky decreased. The production facility operates within the limits of maximum permissible emissions.

Achinsk Alumina Refinery

A large-scale programme of reconstruction of gas and fume treatment equipment continued. During the reconstruction of the sintering kilns, wet gas treatment centres, which are used as an additional stage of cleaning, are mounted after electrostatic filters on all furnaces. This initiative of the Company which was not provided for earlier by either technical or technological solutions, will allow reducing the emissions of Achinsk Alumina Refinery in terms of dust, suspended solids by half. This cleaning level will make it possible to clean up to 98% of flue gases and dust and to further capture up to 1.5 thousand tonnes of dust per year. In general, the emissions of dust of the sintering shop into the atmosphere should be reduced by at least 30-40%.

During 2017, the Company introduced this installation on one furnace and began construction on another 10 furnaces. On 12 furnaces there will be installed 14 wet gas treatment centres in total.

Nikolaev Alumina Refinery

The retrofitted gas treatment centre has been commissioned at the third limestone bake oven. It has electrofilters that provide a 99.9% cleaning level. As a result, treated flue gases must go into the atmosphere, the dust remains in the electrofilter and is sent to mud disposal by air fluidisation system. The production facilities plan to reconstruct another electrofilter on the second bake oven. Once completed, all furnaces will comply with the most stringent requirements not only of Ukrainian but also international standards in terms of particulates emissions.

The reconstruction of the gas treatment equipment has also continued on Kremny (Shelekhov) and Silicon Ural (Kamensk-Uralsky).

Silicon Ural

After the launch of the new gas treatment centre, it will be possible to retain up to 98% of inorganic dust emissions.

Middle-Timan bauxite mine

In order to reduce the dusting during the mining and transportation of bauxites during the dry period, roads and waste dumps are irrigated with water.

ARMENAL

Commissioning of a distillation unit for vapours of lubricating and cooling liquids allowed reducing emissions of petroleum products into the atmosphere by 90% and reducing costs due to their secondary use.

Emissions monitoring

UC RUSAL production facilities pay a lot of attention to the implementation of activities in the framework of monitoring the state of the environment. Preparations are under way for the introduction of an online monitoring system that will allow monitoring the situation with emissions at RUSAL's production facilities at any time. At Khakassky and Boguchansky Aluminium Smelters, where advanced gas analysers are installed, continuous monitoring of emissions at gas treatment canters is being carried out. Experimental tests of similar equipment are being carried out at a production facility in Krasnoyarsk. A continuous monitoring system was launched in the test mode at one of the gas

treatment centres of Krasnoyarsk Aluminium Smelter in February 2017. It allows obtaining continuous data on emissions of pollutants and making management decisions in a timely manner. The test results showed the effective operation of the system, hence the online monitoring sensors will be installed on two more pipes.

The main effect of reducing emissions and achieving standards by UC RUSAL production facilities is expected after the implementation of environmental measures planned for 2017-2021.

Climate Change

Approach

Addressing the effects of emissions on climate change has been among the priorities of UC RUSAL over the past decade. In 2007, the Company launched the Safe Future Strategy initiative aimed at reducing the impact on air and minimising the impact on climate. In 2008, it joined the United Nations Global Compact 'Caring for Climate – the Business Leadership Platform' initiative. In the light of the goal to reduce greenhouse gas emissions achieved in 2014, UC RUSAL, on the eve of the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris, made public the five climate change objectives aimed at reducing the carbon footprint and implying the refusal to purchase fossil-fuelled power, increasing energy efficiency and reducing greenhouse gas emissions, and the introduction of clean technologies, new environmental standards and a number of other measures. At the beginning of 2017 the targets were updated and their number increased from five to seven.

RUSAL actively joined the work of global organisations on sustainable development issues. The Company is a member of the Aluminium Stewardship Initiative (ASI) and Carbon Pricing Leadership Coalition of the World Bank (CPLC), where they interact with the participants of the supply chain of aluminium products from around the world. RUSAL participated in the development and implementation of ASI Performance standard applicable to the supply chain of aluminium products, developed by this organisation. The purpose of the Company is to certify its production according to the requirements of this standard.

In order to inform the employees about the increasing greenhouse effect as one of the global challenges and solutions offered by RUSAL to dramatically improve the situation in Russia, the world and the industry, a corporate 'Clean Step' education programme has been launched. It is designed to enhance the competence of staff in environmental matters, an environmentally responsible approach at their workplaces.

RUSAL representatives, being members of the official Russian delegation to the UN climate talks, participate in the discussion of market and non-market mechanisms that stimulate emission reductions and activities conducted on the sidelines of climate conferences.

Seven strategic objectives of UC RUSAL for greenhouse gases until 2025

- To purchase at least 95% of their electricity from hydroelectric power plants and other types of carbon-free power generation for the aluminium smelters.
- Reduce direct specific greenhouse gas emissions by 15% in existing aluminium smelters against the level of 2014.
- To reduce direct specific greenhouse gas emissions by 10% as compared to 2014 by existing alumina smelters.

- Reduce the specific electric power consumption by aluminium smelters by 7% as compared with 2011.
- Achieve the average of specific direct and indirect greenhouse gas emissions by the reduction department of no more than 2.7 tonnes of CO_2 equivalent per tonne of aluminium
- To use an internal carbon price when making strategic and investment decisions starting in 2017.
- Support Russian and international initiatives and associations advocating active actions to prevent climate change and backing carbon prices as long as they are aligned with the strategic goals of the Company.

Measures to reduce carbon footprint GRI 305-5, HKEx KPI A1.5,A1.6.

The key actions in the area of greenhouse gas emissions in 2017 were as follows:

- Improvement of plans to reduce specific emissions from the Company's aluminium and alumina facilities;
- Further decrease in the share of purchased electricity from renewable sources;
- Development of low-carbon aluminium ALLOW;
- Use of the internal price of carbon in the decision-making process for investment projects and strategic development of the Company.
- Approval by an independent verifier of the carbon footprint of aluminium produced at UC RUSAL production facilities.

In 2018, the main areas of work in the field of greenhouse gases are:

- Introduction of ASI Standards in the management company, at Irkutsk Aluminium Smelter, Ural Aluminium Smelter and Boksit Timana bauxite mine.
- Reporting on greenhouse gases in accordance with the Aluminium Carbon Footprint Technical Support Document developed by the International Aluminium Institute.
- Development of concrete practical solutions for the implementation of a carbon-free strategy.
- Assessment of climatic risks of RUSAL. Possible adaptation measures.

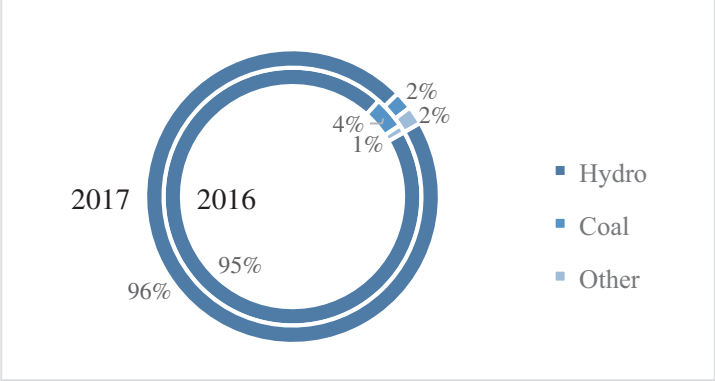
In 2017, the Company continued to implement measures to reduce greenhouse gas emissions. In addition to the main production, work on the record and analysis of greenhouse gas emissions was also carried out at facilities producing alumina, silicon and foil.

More than 90% of the aluminium production of UC RUSAL is covered of clean renewable hydropower. Bratskaya, Irkutskaya, Ust-Ilimskaya, Krasnoyarskaya, Sayano-Shushenskaya and Boguchanskaya HPP in Siberia cover the operation of the key production facilities of UC RUSAL.

RUSAL reduces the share of purchased carbon-intensive electricity in production, which is fully in line with the basic principles of the Agreement adopted at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris. The next thing in the agenda is to reach the full supply of hydropower to Novokuznetzk Aluminium Smelter.

In 2015, Krasnogorskaya thermal power plant was included in the Ural aluminium smelter. In order to implement the Company's plans to reduce the carbon footprint, a programme was developed to convert to 100% combustion of gas fuel. The abandonment of coal has already reduced carbon dioxide emissions by 15%. At the moment all the electricity of Krasnogorskaya CHPP is produced using gas. Coal can be used in limited quantities in emergency situations when there are constraints on the supply of natural gas.

Sources of electric power for aluminium smelters



The continuing rise in the share of hydropower in energy supply due to direct contracts with the suppliers of hydropower.

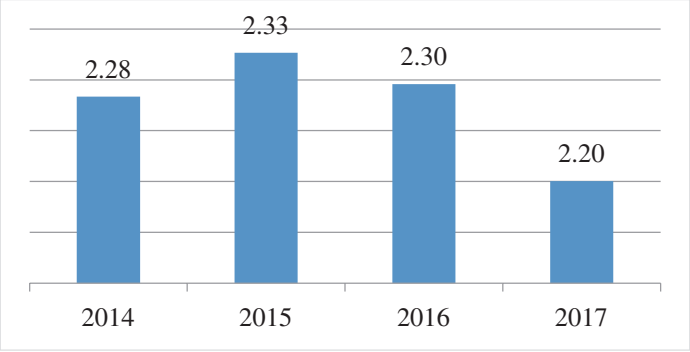
The reduction of greenhouse gas emissions and carbon footprint is one of the main strategic objectives of UC RUSAL. The Company is systematically working to increase the share of the so-called low-carbon aluminium (ALLOW) in total production. The greenhouse gas emissions in CO2 equivalent produced for every tonne of ALLOW aluminium are minimal (less than 4 tonnes per tonne of aluminium) and in line with the best indicators of the global aluminium industry. The carbon-free production strategy of UC RUSAL is based on the maximum reduction of direct and indirect energy emissions of greenhouse gases and the replacement of the undiminished portion of emissions by the reductions from the projects outside the Company aimed at reducing greenhouse gas emissions, absorbing or capturing them. The second important area is the development of the inert, carbon-free anode. If successful, direct greenhouse gas emissions from aluminium production will be zero, and other emissions of other pollutants into the air will also be minimised. UC RUSAL has advanced the most in the solving of this problem and is testing technology at the industrial site. As a result of these tests, a decision will be made in 2018 to gradually retrofit the potrooms.

Under the existing agreement with the International Aluminium Institute (IAI), UC RUSAL maintains annual accounting of greenhouse gas emissions and energy consumption in the production of primary aluminium, energy use in casting production and alumina production, and the use of anodes and anode paste.

Results

The strategic objective to reduce the amount of direct greenhouse gas emissions to the atmosphere by aluminium smelters by 50% compared to 1990 by 2015 has been achieved and maintained below the specified level.

Direct specific emissions of greenhouse gases of reduction areas, tonnes of CO2 eq per tonne of aluminium **GRI 305-4, HKEx KPI A1.2.**



In 2017, the Company developed and verified by an international independent expert an internal methodology for determining direct greenhouse gas emissions in the production of primary aluminum, taking into account all the features of UC RUSAL aluminum plants. Direct specific greenhouse gas emissions of electrolysis plants in the period 2014-2017. calculated using the accepted methodology, and also using the updated angular-slope coefficients and the CF4/C2F6 weighting ratio, based on instrumental measurements, the current value of the Global Warming Potential for CF4 and C2F6 was also applied (IPCC Fourth Assessment Report, 2007).

The Company has set a strategic objective to reduce the direct specific emissions of aluminium production by 15% by 2025, and by 10% the direct specific emissions of alumina production compared to 2014. According to the results of emission reduction programmes developed in the Reporting Period, specific emissions decreased in aluminium production by 5.5% compared to 2016.

Since 2017, UC RUSAL has been implementing an internal pricing mechanism in the decision-making process for any investment projects. To assess the risks associated with the change in carbon emissions from the project implementation, its financial model uses an internal price of USD 20 per tonne of CO_2 equivalent. The internal price of carbon is also used in the Company's general financial model to assess the risks associated with making strategic decisions regarding the expansion of the Company, new construction, acquisition or closure of production facilities, decommissioning and sale. In the event that the price of carbon leads to a loss of profitability of the financial model, the Company seeks to find a more acceptable option to reduce carbon emissions or decides to abandon the project.

Since 2015, UC RUSAL has participated in the CDP Global Initiative (Carbon Disclosure Project), and together with other leading world companies has committed itself to disclosure of information about its greenhouse gas emissions. Information about greenhouse gas emissions from aluminium, alumina and silicon facilities was published as part of the preparation of the annual CDP report.

In the previous period, work was done to improve the method of calculation of carbon footprint from aluminium production and to calculate indirect emissions from the generation of purchased power.

Participation of UC RUSAL in the Climate Partnership of Russia

On the eve of the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris in 2015, RUSAL, together with several other Russian companies, put forward the initiative to bring together the efforts of domestic businesses to reduce environmental impacts and prevent climate change, which is achieved by supporting the Climate Partnership of Russia.

Russian companies have also asked all participants of the international negotiation process to enter into a legally binding agreement that will enable countries to take joint responsibility for climate change. Such agreement implies a single, universal format of commitments for all countries, unified mechanisms to ensure the implementation of these commitments and full monitoring of their implementation. The participants of the initiative advocate equal conditions of international competition for all participants of the process, and suggest the introduction of market-based mechanisms to encourage business to switch to new production technologies.

In turn, the companies that joined the initiative committed themselves to: strive to produce products consistent with the principles of low-carbon, green economy. *(Please see also the section 'Interaction with Stakeholders. Participation in industry organisations and international initiatives.)*

Participation in activities under the UN FCCC

Representatives of the Climate Partnership of Russia participated in the 23rd session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Bonn (6-17 November 2017). Here, the Russian pavilion was operating for the first time - RUSAL took an active part in the business programme preparation. On the "Low Carbon Aluminium Day", the programme of which was completely developed by RUSAL in cooperation with the Russian and foreign partners and experts, the new ALLOW brand and other approaches aimed at minimizing the impact of production on the environment were presented. RUSAL representatives also took part in a roundtable on Russia's contribution to low-carbon development and climate conservation, as well as the Company's plans to produce low-carbon products and promote environmental education (environmental training for the participants in the "100 students" programme and the environmental course of RUSAL Corporate University for the Company's employees). Information on the RUSAL's activities on the climate agenda are reflected in the Seventh National Communication of the Russian Federation under the UNFCCC, presented in December 2017 (www.unfccc.int).

Participation in the events of the Year of Ecology

In May-June 2017, RUSAL took part in the All-Russian Climate Week within the framework of the Year of Ecology, which was held in Russia for the first time by the decision of the interdepartmental working group under the Presidential Administration on issues related to climate change and sustainable development. Within the framework of the Climate Week, RUSAL conducted 15 environmental events in the regions of its operation to raise public awareness of the problems of environmental pollution and climate change.

At the Climate Forum in Russian cities, which took place in Moscow in August, RUSAL talked about its sustainable development strategies, international approaches in the field of carbon regulation and the benefits of using renewable energy in aluminium production. Representatives of the Company also actively participated in the climatic session of the business programme of the V All-Russian Congress on Environmental Protection and the II International Exhibition-Forum "Ecotech".

Following the results of the Year of Ecology, the Company was awarded with a Winner certificate in the nomination "Active Environmental Policy of the Company in the Year of Ecology". RUSAL also took the sixth place in the ranking of mining companies in Russia. The ranking was compiled by the World Wildlife Fund in conjunction with the project of the United Nations Development Program/ Global Environmental Fund/ Ministry of Natural Resources and Environment of Russian Federation of Russia project based on the results of the environmental assessment of 33 mining companies.

In the spring of 2017, on the initiative of UC RUSAL, in the cities of RUSAL's operation, ecological marathon "Green Wave" started (for more details see section "Events of the ecological marathon "Green Wave").

Waste

Approach

The activity of UC RUSAL in the area of waste management is aimed at the achievement of key strategic objectives: increase in the share of recycling and reuse of waste, safe storage and disposal of waste, total abandonment of use of PCB equipment and disposal of available PCB waste.

In order to ensure the safe disposal of waste, the Company is actively engaged in the construction of new, reconstruction and retrofitting of existing waste disposal facilities.

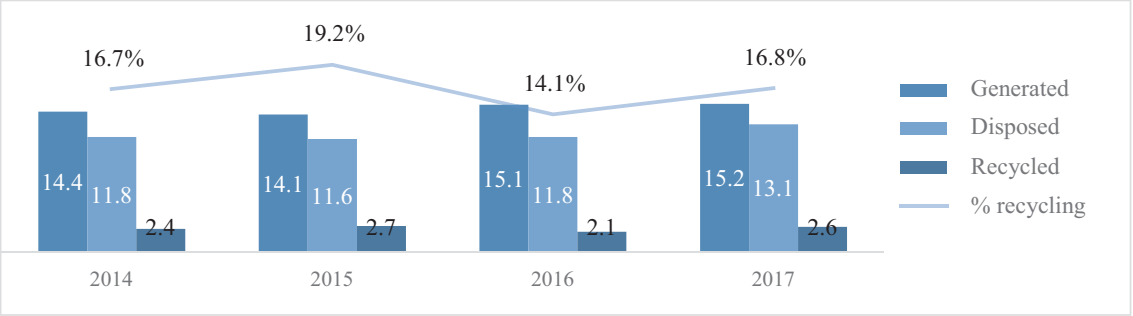
Results HKEx KPI A1.1.

At the end of 2017, the production facilities of the Company accumulated 894 million tonnes of waste, including:

- red/nepheline mud – 415 million tonnes (46%);
- overburden rocks – 403 million tonnes (45%); **HKEx KPI A1.4. GRI MM3**
- spent pot lining — 0.726 million tonnes (0.1%).

Unlike most of the other countries of RUSAL's operation, the Russian legislation classifies the overburden rocks as the waste category. The total amount of produced waste without overburden rocks increased from 15.1 million tonnes in 2016 to 15.2 million tonnes in 2017. So did the disposed waste - from 11.8 million tonnes in 2016 to 13.1 million tonnes in 2017. The volume of processed waste, including sale and transfer to third party organisations, increased from 2.1 million tonnes in 2016 to 2.6 million tonnes in 2017.

Trends in the generation, disposal and recycling of waste, excluding overburden rocks, million tonnes GRI 306-2, HKEx KPI A1.1.



The ratio between waste categories by the method of treatment has also changed slightly. Thus, the share of waste disposed of at own sites or transferred to third parties decreased slightly from 86% to 84%. Accordingly, the proportion of recycled waste increased from 14.1% to 16.8% **GRI 301-2**. The dynamics of processing waste directly depends on the volume of processing of red and nepheline mud, which are waste products of alumina production.

In 2017, 14.84 million tonnes of non-hazardous waste (excluding overburden rocks) were formed, of which 13.11 million tonnes were placed and 1.97 million tonnes were recycled. Also, 0.37 million tonnes of hazardous waste were also generated, of which 0.03 million tonnes were disposed of, and 0.58 million tonnes were recycled. Hazardous waste is transported by the production facilities themselves and by specialised organisations if appropriate licences (in the Russian Federation) or similar permits required in accordance with national laws (for overseas production facilities) are available. Transboundary transportations of hazardous waste are not carried out. **GRI 306-4, HKEx KPI A1.3.**

Aluminium is the most frequently recyclable material, it is easily disposed of and is recycled by 100% without losing its unique properties. Today, in the world practice, production of secondary aluminium occupies about 30% of the total output, and its share continues to grow.

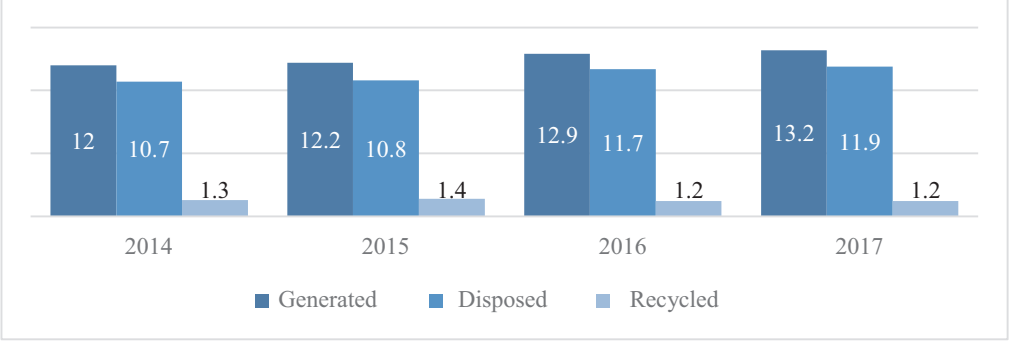
The form of end products (ingots, slabs, etc.) does not require the use of a special package for delivery to consumers, so this kind of waste is practically absent at most of the Company's production facilities. **HKEx KPI A2.5.**

Share of recycled or secondary used waste from total volume of generated waste, %

2014	2015	2016	2017
16.7	19.2	14.1	16.8

The major types of waste produced by the Company are the red and nepheline muds, which are considered non-toxic waste of 5th class of hazard to the environment. They constituted 86.6% of the total amount of waste generated. The quantities of generated mud are directly related to the dynamics of production, and also depend on such factors as the depth of ore beds and the percentage of alumina in the processed ore and bauxites.

Dynamics of the formation and use of mud from the alumina production, million tonnes **HKEx KPI A1.4.**



The quantity of processed mud is directly dependent on the implementation of the measures for the construction of red mud disposal areas. In 2017, the level of generation of mud from alumina production amounted to 11.9 million tonnes, the volume of mud recycling is similar to the level of the previous year - 1.2 million tonnes.

In 2017, UC RUSAL implemented a large number of environmental projects for the construction and reconstruction of mud disposal areas. **HKEx KPI A1.5, A1.6.**

- At Achinsk Alumina Refinery, the red mud disposal area No 3 has been put into operation. It is designed for the disposal of 112 million cubic metres of waste during 20 years. The new red mud disposal area will allow the operation of the Achinsk Alumina Refinery to be extended until 2035. During the facility construction, all advanced environmental requirements have been met and the latest technologies have been applied, which guarantee its safety.
- On the Bogoslovsk Aluminium Smelter, a second stage of red mud disposal area was commissioned, which would allow alumina production to be operated until 2024 and after all three stages are commissioned, until 2036.
- Reconstruction of the sludge storage at the silicon production facility, located at the Shelekhov industrial site of RUSAL, was completed. The dam has become stronger and higher, due to this the effective volume of the waste storage has increased, the ecological safety of the structure has increased – the threat of overflow and destruction of the dam has been eliminated.

UC RUSAL is developing and applying technologies for processing specific waste of aluminium and alumina production in cooperation with the research centres and institutes. The Company's production sites continue to work on ways to reduce the amount of waste they dispose of in landfills and mud disposal areas.

The following measures are implemented in the Company to increase the share of processed waste: **HKEx KPI A1.6.**

- recycling of spent refractory lining (R&D);
- removal of sulphates from gas treatment solutions - pilot plants at the Krasnoyarsk Aluminium Smelter and Novokuznetsk Aluminium Smelter;
- extraction of scandium oxide from red mud - a pilot site for obtaining Sc_2O_3 was created;

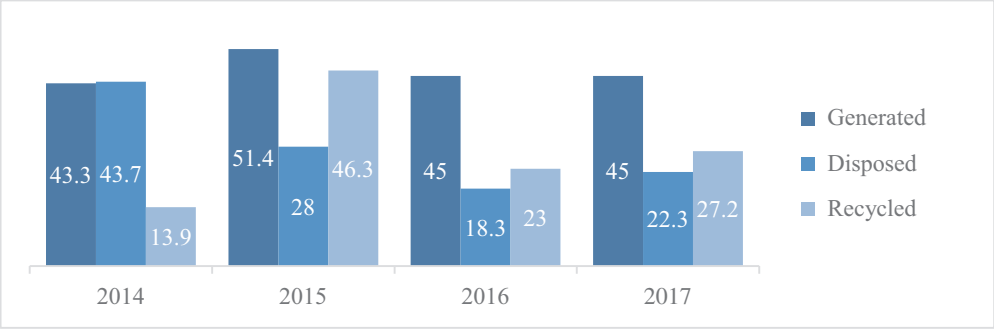
Currently, there are no economically justified technologies for recycling red mud - the main type of alumina waste. This problem remains unresolved, and RUSAL, like all the world's leading aluminium companies, continues to search for technologies for their recycling.

- At Ural Aluminium Smelter, a pilot plant for de-alkalinisation and dehydration of red mud was assembled and developed. The production facility has launched the industrial production of scandium concentrate from red mud according to the technology developed by RUSAL specialists. The purity of the final product is 99.4%. Work is underway to improve the technology in order to reduce the cost of production. In the future, it is planned to increase the capacity of the existing plant to 0.8-1.4 tonnes of scandium oxide per year. The obtained products will be used for the production of alloys at RUSAL's prodcution facilities.

- At Bratsk Aluminium Smelter, about 54% of the total waste generated is used in own production, recycled and sold as raw materials to third parties. The Company's goal is 100% recycling. Patented by RUSAL and tested at the production facility, technology for the extraction of sodium sulphate from technological solutions makes it possible to obtain a dry commercial product with a sodium sulphate content of 98.6%. It can be used in the production of building materials, glass, detergents, as well as pulp. In particular, sodium sulphate from the experimental site was tested in the laboratory of Bratsk Pulp and Paper Mill, where it will be supplied in the future.
- At the Bogoslovsky Aluminium Smelter, a commercial-quality sodosulphate blend production was set up. The blend is a by-product of the production of alumina from bauxite with a high sulphur content, before it was accumulated at the production facility as waste. To improve the quality of the blend, Bogoslovsky Aluminium Smelter retrofitted the equipment and created a new production site. Now all the volume produced at the production facility - more than 2 thousand tonnes of sodosulfate blend every month - is sold to the producers of detergents.
- Using the principles of effective waste management at the Volgograd Aluminium Smelter, the Company has successfully implemented a project that allowed transferring about 67 thousand tonnes of waste for processing to the third party companies. The Company has developed options for the sale of flotation mud, cathode and anode waste for further recycling and, as a result, reduced the load on its own landfill.

The second important waste of UC RUSAL production facilities (after mud) is spent carbon cell lining.

Dynamics of generation and processing of carbon lining, thousand tonnes **HKEx KPI A1.4.**



The volume of carbon lining waste in the reporting period is similar to the level of 2016 and amounts to 45 thousand tonnes. At the same time, the volume of recycled waste increased from 23.0 thousand tonnes in 2016 to 27.2 thousand tonnes in 2017.

Volumes of this type of waste, which belong to the fourth class of low-hazardous substances, directly depend on the number of capital repairs of reduction cells. Approximately 15 kg of carbon lining is produced from one tonne of aluminium.

Since 2011, work has been carried out in the Aluminium Division to increase the sale and use of production waste, including through the participation of specialists from research organisations and specialised universities. As a result, the share of recycled waste of carbon lining has increased significantly over the past three years: in 2015, it made up 90.1%, in 2016 – 51%, in 2017 - 60.5%, which is much higher than the best indicator of the previous period of 40%.

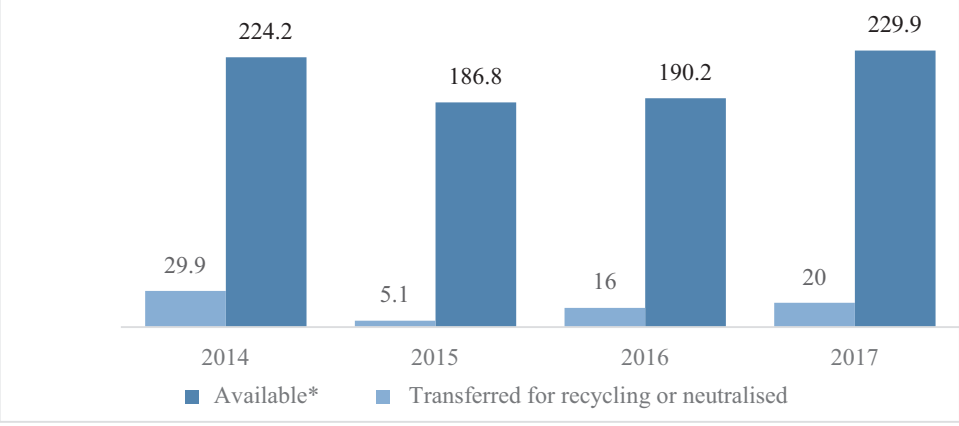
In the Reporting Period, a site was launched to recycle the carbon lining at the Krasnoyarsk Aluminium Smelter. It produced over 14.5 thousand tonnes of lining in 2017, as well as 13.3 thousand tonnes of baked anode butts.

The microsilica captured by the gas scrubbers at Kremny-Ural can potentially be sold to construction companies. The list of waste products that SUBR sells to various processors comprises 55 items ranging from metal scrap to used motor oil.

The Company's production facilities have existing and decommissioned equipment as well as waste containing PCBs. At the end of 2017, the volume of PCBs in the existing equipment was of 229.4 tonnes.

As part of the ongoing work of disposal of PCBs during the reporting period, 20 tonnes of PCB waste (16 tonnes in the previous year) were neutralised and transferred to third party organisations for disposal. It is planned to remove completely all equipment and waste containing PCBs by 2022.

Amount of PCBs containing materials neutralised and transferred for recycling, tonnes[30]



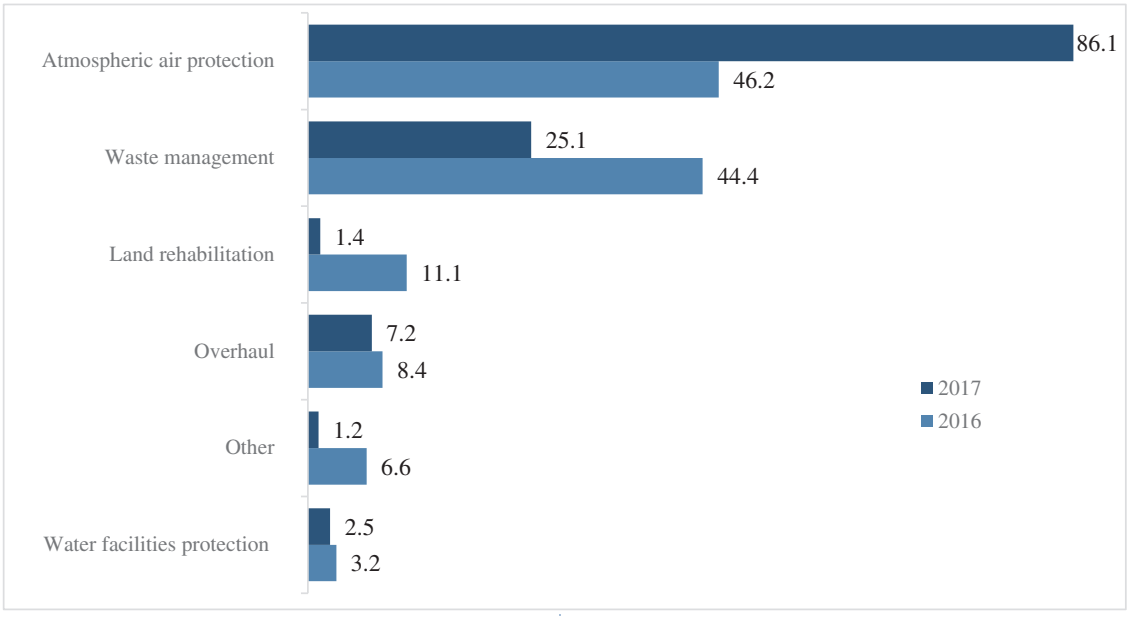
In 2017, with the purpose of updating the amounts of PCBs at the production facilities, the inventory of PCB containing equipment was carried out.

INVESTMENTS IN ENVIRONMENTAL PROTECTION

In 2017, UC RUSAL continued to invest in environmental activities in accordance with the strategic objectives defined by the Company's environmental policy. The total amount spent on scheduled environmental activities exceeded USD 120 million, which is the same as the previous year's level.

[30] Taking into account the inventory of equipment containing PCBs.

Cost of environmental measures, million USD.



In 2017, the level of environmental obligations to achieve emission standards, pollutant discharges and safe waste management amounted USD 114 million.

In general, the pattern of allocation of funds to environmental protection areas remained unchanged. The largest share is still spent on waste management and air protection measures - 70% (USD 86.1 million) and 20% (USD 25.1 million), respectively. Waste management costs decreased from 37% (USD 44.4 million) in 2016 to 20% (USD 25.1 million), while expenses for the Protection of Atmospheric Air grew by a factor of 1.3 (up to 70%) to USD 86.1 million.

The largest projects in the reporting period in the field of environmental protection include the ongoing retrofitting of aluminium smelters, measures for the replacement and improvement of gas treatment equipment, construction and reconstruction of mud accumulators.

Plans for 2018 and medium term

As an environmentally responsible company, UC RUSAL will continue to implement programmes to reduce negative environmental impacts.

To improve the environmental safety of major production, R&D will be carried out in the areas related to the use of unmoulded materials for cell lining; technology for the processing of carbon lining and flotation tailings; improved technology for the extraction of sulphates from the second stage of gas treatment and the receipt of marketable products from them; development of technology for obtaining green pitch from coal to form anodes for the reduction area that reduce pyrene emissions by 10 to 15 times, to a minimum level.

In 2017, the major tasks and plans of the Company include:

Management and monitoring

- development of programmes to improve the environmental performance of production facilities
- participation in the development and preparation for publication of the Handbook of the Best Available Technologies for Aluminium Production
- elaboration of the principles / recommendations for the gradual transition of the production facilities of UC RUSAL to standardisation based on the best available technologies (BAT) and obtaining comprehensive permits
- creation of pilot projects for the transition to the standardisation based on BAT for the Boguchansky aluminiumm smelter under construction and operating Krasnoyarsk Aluminium Smelter
- consolidation of process and hygienic standardisation
- selection of optimal solutions for automatic production control

Impact on air

- implementation of activities aimed at achieving maximum permissible standards of impact on air
- retrofitting of gas treatment facilities
- retrofitting of production within the framework of the Green Soderberg project

Climate Change

- creation of the corporate system of management of greenhouse gas emmissions recording of the carbon footprint throughout from bauxites to final products

Impact on land resources

- reclamation of disturbed lands Disturbed land

Impact on water resources

- mitigation of the risks of production facilities in the area of discharges into cetralised wasterwater disposal

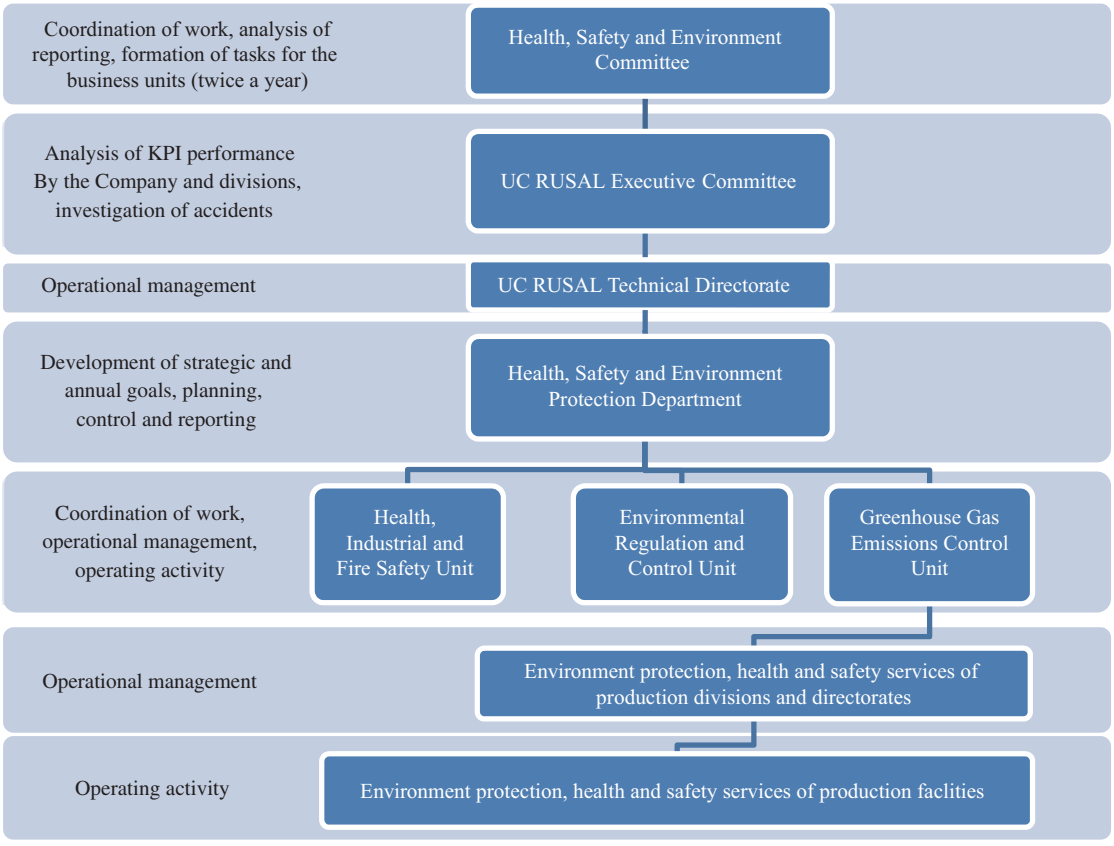
Waste

- implementation of rolling measures for the reconstruction and retrofitting of red mud disposal areas, construction of advanced facilities for waste disposal
- migation of risks of production facilities in the area of waste management
- work on the development and implementation of technologies for processing and use of waste

7. WORK SAFETY

MANAGEMENT SYSTEM

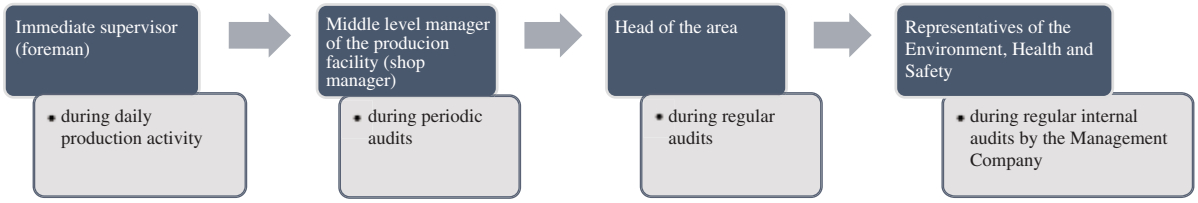
UC RUSAL considers the provision of life and health-friendly working conditions in the workplace to be the direct responsibility of managers at all levels of the Company. The Company has a vertical system for the management of health, industrial and fire safety ("HSE Management System"). **GRI 103, HKEx KPI B2**



In 2017, the number of persons employed by the business units within the HSE management system increased by 13% and made up 197 persons. At each production facility, the HSE Management System includes:

- risk management;
- development of an emergency response plan and emergency procedures;
- procedure for the creation of budgets for health, industrial safety and safety measures;
- a system of reporting of accidents and lessons learned;
- a system for ranking setting of the key indicators of HSE assessment and assessment of their achievement;
- training of staff according to the requirements of the law of the countries of operation and the Company's regulatory documents;
- a system of corporate electronic distance learning and training in safe working methods.

The Company's production sites have thorough monitoring of the state of work safety. Such monitoring activities are carried out at the following levels:



In order to comply with the best practices of the HSE Management System the following production sites has been certified to conform to the international health and safety standard OHSAS 18001:2007:

RUSAL GLOBAL MANAGEMENT B.V. (Management Company);	Krasnoyarsk Aluminium Smelter;
Novokuznetsk Aluminium Smelter;	Bratsk Aluminium Smelter;
Sayanogorsk Aluminium Smelter;	SAYANAL foil rolling mill;
Achinsk Alumina Refinery;	Nikolaev Alumina Refinery;
Volgograd aluminium smelter	Metallurg Service Centre (Nikolaev);
Branch of the Russian Engineering Company (business unit of the Company's Engineering and Construction Division) in Achinsk;	Kandalaksha aluminium smelter
Nadvoitsy aluminium smelter;	Irkutsk Aluminium Smelter
Powder Metallurgy - Shelekhov	

In 2017, Det Norske Veritas Germanischer Lloyd carried out recertification audits on two production facilities and the Management Company. Audits confirmed the compliance of the HSE Management System with the requirements of OHSAS 18001:2007 standard.

The performance of the HSE Management System from the point of view of compliance with the requirements of the OHSAS 18001:2007 standard is assessed not only by external auditors but also through internal audits. Thus, in 2017, UC RUSAL carried out 43 internal audits (31 in 2016), including at the Company's production sites not covered by the scope of OHSAS 18001:2007.

Approach

The unchanged priority of UC RUSAL is the work safety of its employees, industrial and fire safety of production processes and operations. **GRI 103, HKEx KPI B2**

In accordance with the ethical principles and UC RUSAL standards in health, industrial and fire safety, every employee of the Company, from specialists to supervisor, must:

- be aware of personal responsibility for their lives and health, and for the life and health of others;
- know the risks accompanying their activities;
- by personal example encourage the safe conduct of their colleagues and contractors.

The work of UC RUSAL in the area of work safety is carried out in accordance with the laws of the country of operation, as well as corporate regulations and procedures, which stipulate the requirements for safe working conditions and for the reduction of occupational diseases and injuries.

In the Russian Federation, UC RUSAL focuses primarily on the following work safety instruments:

- *Labour Code of the Russian Federation*;
- *Federal Law No 116-FZ On industrial safety of hazardous production sites dated July 21, 1997*;
- *Federal Law No 426-FZ On special assessment of working conditions dated December 28, 2013*;
- federal rules and regulations in the area of industrial safety;

In 2017, 317 audits were carried out at the Company's production facilities by the supervisory authorities. The results of the audits confirm compliance with the requirements of the legislation in the areas of health, industrial and fire safety and sanitary and epidemiological welfare.

UC RUSAL continuously monitors changes in HSE legislation. In order for UC RUSAL professionals to meet the new professional standards of HSE specialist, the relevant training is carried out.

The Company is also actively involved in the assessment of the regulatory impact of draft regulations, the holding of round tables and meetings on HSE issues and the preparation of necessary amendments.

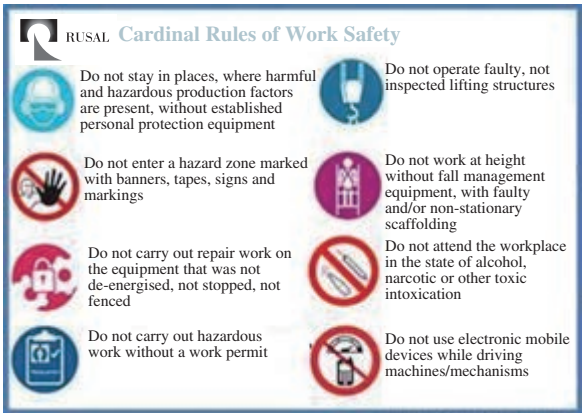
Since 2014, the activity in the area HSE at the production facilities of the Company is defined by UC RUSAL Policy Statement in the area of health, industrial and fire safety, taking into account the changed requirements of the Russian law in this area. The document had not been amended in 2017.

In the context of compliance with HSE requirements, the Company is guided by the following Goals of sustainable development – 2030:
Goal 3: Good health and well-being

In the Reporting Period, a number of new documents was adopted in the area of HSE management, including the following:

- Internal order on the organisation of audits of management systems for compliance with international standards ISO 9001, ISO/TS 16949, ISO 14001, OHSAS 18001 and FSSC 22000 in 2017.
- Internal order on increasing the responsibility of Company employees for compliance with work safety requirements, which enforces Cardinal Work Safety Rules.
- Internal order on approval of the Regulations on the Central Certifying Commission on Work Safety of the Company.
- Internal order on amendments to health, safety & environment regulations.

An important step in the development of a safety culture at RUSAL was the introduction in 2017 of the Cardinal Rules of Work Safety. According to the analysis of accident rate statistics, the Company has compiled a list of dangerous actions of employees that cause the vast majority of accidents. Eight simple rules were formulated on its basis that underlie the Cardinal Rules of Work Safety. These rules are included in the induction training programme on work safety, they must be communicated to all employees of the Company. Appropriate materials, visual propaganda are posted on all production sites. Cardinal Rules, as well as work safety booklets were printed in thousands of copies in the form of pocket size cards, which must be held by each employee. Cardinal Rules became an integral part of the system of work safety and labour protection at RUSAL.



In the context of compliance with HSE requirements, the Company is guided by the following purposes and principles.

Principles
• The life and health of a human being are more important than production output or economic performance. • Full integration of the health and safety management system into the overall business management and production activities. • All accidents are preventable. • Compliance with law is a necessary and required condition of UC RUSAL business. • Competency and responsibility of the employees is the foundation for safe work. • Safe behaviour of employees must be encouraged and promoted. • Mutually beneficial relations with suppliers and contractors. • Monitoring and measuring performance indicators in the area of occupational health, industrial and fire safety.
Targets
• To strive to eliminate injuries and risk of emergency situations and fire. • To ensure compliance of equipment and production processes with legal and regulatory requirements of occupational health, industrial and fire safety. • To ensure personnel safety and health in the workplace and improve workplace environment on an ongoing basis in order to increase the level of safety. • To prevent the development of occupational diseases.

Training HKEx KPI B3

Training in HSE is provided for all employees, and a set of industrial safety briefings is also carried out on a mandatory basis (induction, primary, repeated, target and unscheduled). Those employees who operate, service and control hazardous production facilities undergo compulsory HSE training. Periodic knowledge checks are conducted to verify staff qualification: once a year, on occupational health, every three years, on industrial safety.

Mentoring is used at the Company's production facilities to allow workers to develop and acquire the necessary skills. The newly employed worker is assigned to an experienced professional, who not only controls their actions in the HSE area, but also helps the worker develop a culture of safe conduct.

In the framework of training of future line managers, including on HSE issues, UC RUSAL has implemented the Talent Pool project. The Company continues to operate a distance learning system containing 18 training courses and programmes in the HSE area[31].

In 2017, a new training course on 'Technological minimum 'Basics of work safety' for engineering specialists was developed and implemented in the system of distance learning.

Training and verification of knowledge in the area of HSE was carried out in strict accordance with the laws of the countries of operation of Company's production facilities. The relevant requirements are also governed by internal documents of UC RUSAL production facilities.

Special safety programmes

As part of the training aimed at raising the awareness of occupational safety in the workplace, UC RUSAL implements various topic-based programmes. They aim both at the improvement of the culture of compliance with HSE rules and the addressing of specific risks.

The project to improve the quality of training of crane operators at the Sayanogorsk Aluminium Smelter

In order to improve the quality of the training of crane operators and to reduce the risk of accidents during loading and unloading operations, the project to improve the quality of the training of crane operators has been developed and implemented. There were assigned production training foremen who completed a special programme on 'Trainings, mentoring', 'Safety in the operation of the lifting mechanisms', 'Accident and injury experience at the lifting mechanisms'. Two simulators of special pot tending cranes have been installed to provide practical skills in isolation from the actual production of the production facility.

The project was successfully continued in the Reporting Period. While in 2015 there were four incidents in the operation of the lifting machinery, in 2016-2017 there were no such incidents.

The project of safety in the use of loading machines

In order to reduce the risk of injury in the performance of the works with the use of loading machines, NGZ has developed a project of safety in the use of loading machines. The project included a questionnaire for the employees to evaluate working conditions through queries and developed a number of proactive measures. As a result of the measures undertaken, the risks of dangerous situations with loading machines are minimised. In 2017, there were no injuries or accidents in the use of the loading machines.

At the Bratsk and Krasnoyarsk Aluminium Smelters specialised sites were created that fully imitate the potroom of the smelter, where the operators of intrashop floor equipment develop their professional skills.

[31] For more information see the Chapter 'Employees' of this Report.

Within the framework of the Safe Potroom project, a new reflective floor marking has been applied in the potrooms No 5-6 of the Krasnoyarsk Aluminium Smelter. New reflective elements have also been added to the loading equipment, pillars and other structural elements. Reflective floor lines have already proved their efficacy on the Khakass aluminium smelter.

Safety programmes at the North Urals Bauxite Mine:

As a significant number of injuries occur in the production of raw materials and in the production of alumina, in 2016-2017 the following actions and programmes to ensure safety were developed and implemented at the North Urals Bauxite Mine.

- for the reduction of injuries from falling pieces of ore and rock.
- for the mechanisation and safety of track works in the mine (in 2017 track-repair train PGI-2 was purchased);
- the activities of implemented projects 'Safe Mine', 'Chess Board', 'Prevention of Falls' are supported at all the mines of North Urals Bauxite Mine;
- systems of remote control of trolley locomotives are implemented at all mines;
- 'Take Care' audio programme is broadcasted at the zero sites of the mines;
- the Programme to increase the level of industrial safety and employee motivation was developed and implemented.

The project of retrofitting of dust collecting systems at the Boxitogorsk Alumina Refinery

In the framework of the programme the audit of dust collection systems was carried out, a specialised organisation is implementing the action plan for retrofitting and replacement of dust collection systems until 2018 inclusive.

Training of members of the auxiliary mine-rescue teams of the mining company Timan Bauxite

In order to practice skills in the environment unsuitable for breathing, the members of the auxiliary mine-rescue teams of the Timan Bauxite company purchased the unit for the production of safe (theatre) smoke.

The project of implementation of 'Work Safety Self-Assessor' software on Nikolaev Alumina Refinery

Purchased software with a full database of laws and regulations on work safety (in terms of laws and regulations related to the operation of the production facility) with further support (renewal of laws and regulations), specialists of the HSE unit were trained in the organisation of audits of knowledge on work safety and labour protection using 'Work Safety Self-Assessor',

Programme for the prevention of occupational sensorineural hearing loss

In 2017 at the production facilities of the aluminium, alumina and engineering and construction divisions the programme for the prevention of occupational sensorineural hearing loss was put into force with the purpose of reduction of the impact of noise on workers as a result of use of new types of hearing protection. The results of the programme will be announced in the first quarter of 2018.

More than 300 employees of the industrial site of the Ural aluminium smelter took part in the activities for the prevention of occupational sensorineural hearing loss, decrease of occupational diseases and industrial injuries. The target programme includes workshops for leadership and training sessions for workers. 60 workers were tested, personal protective equipment were individually selected for each one of them. More than 200 workers in the shops participated in the 'health breaks' dedicated to the prevention of occupational diseases of hearing organs.

Additional activities to reduce injuries are implemented:

- Equipment of work safety cabinets with complementary training equipment for practical training.
- Installation of spherical mirrors in the hazardous areas of the production facilities.
- Purchase and installation of training polygons when working at height.
- Purchase and installation of the systems of rescue and evacuation from height of crane drivers.
- Purchase and installation of the systems of protection against falling from heights during cell maintenance.
- Purchase and installation of the locking systems of LOCKOUT type.

'Business Unit Safety Passport' at the Volgograd aluminium smelter

Long-term project of 'Business Unit Safety Passport' aims at a comprehensive assessment of the work of the business unit in the area of HSE, using a number of objective indicators. Each of them is assigned a numerical score that allows determining the overall level of safety of the business unit.

Activities in the framework of this project allow to rectify the number of violations of the employee in the area of occupational health during their work at the production facility, to determine the contribution of the individual employee in the HSE area, to evaluate the work of a particular business unit, the level of security at the level of directorates. Project goal is achieved: in 2015-2016 the injury rate at the production facility was reduced to zero in 2017 – there was one accident.

The project of 'Safety of Third Parties on Guinean Railways' at the Compagnie des Bauxites de Kindia

An analysis of the injuries of third parties on the sections of the railway of UC RUSAL production facilities in Guinea revealed the key problem: unauthorised access to railways upon the passing of trains and the use of roads by the local population as transient traffic flows. In order to reduce the risk of injury, since 2007 the Company has been building awareness, undertaking measures to organise crossings and protect the railways, working with the national police. The implementation of this project has resulted in an orderly reduction in the level of injuries on the railway. In connection with the reopening of the complex Friguia in 2018 is planned to resume this project on the railroad city of Phrygia.

The facilities of the Compagnie des Bauxites de Kindia also recorded numerous road traffic accidents in 2016 due to the fatigue of truck drivers, who fell asleep on the line. After the equipment of the drivers with individual Antison device, without which they do not go on a trip, the accident rate due to this reason reduced by 90%.

Collective bargain agreements

The Company has a collective bargain agreement with the employees of most production facilities, which establishes in a separate section health and safety (labour protection) issues, which allows improving the HSE management system[32]. The content of collective bargain agreements is subject to mandatory approval by trade unions. **GRI 102-41**

Through their representatives in trade unions, workers are also involved in the solution of work safety issues. Each production facility has a representative from the trade union organisations in charge with HSE, which participates in the relevant activities. On a parity basis with the representatives of the administration, they are part of the HSE committees (commissions). **GRI 403-1, GRI 403-4**

In the spring, on the eve of the World Safety Day the production facilities of the Company hold contests for the title of the Best Work Safety Officer.

Emergency situations

UC RUSAL is aware of the risk of emergencies and continues to undertake active actions for the prevention, response and mitigation of emergencies.

The Company has a well-functioning alert and information system about emergencies, assesses the risk of an emergency, prepares action plans to prevent emergencies, and develops plans for emergency recovery. The Company has a Regulation on notification of the leadership about emergencies and supports high readiness of employees and technical means for rescue works. Some production facilities of the Company operate their own fire and rescue business units staffed with trained personnel and equipped with appropriate equipment. In other cases, contracts are made with public and private entities to provide emergency response and fire safety services.

Production facilities also prepare for emergency response, especially in the fire hazardous spring period. The specialists verify the readiness of the fire extinguishing equipment as well as the operation of automatic fire fighting and signalling equipment and conduct fire drills. Training in countering terrorism acts involves the personnel and rescue services of the production facility, staff of security providers and security agencies. In total, 48 joint exercises were carried out at the Company's production facilities in conjunction with the EMERCOM units in 2017.

In order to prevent the occurrence of the emergency, hazardous situations are monitored at the Company's production facilities. Monthly reports of identified situations, indicating the dynamics of the effectiveness of corrective actions, are being prepared.

ACTIONS

Efforts to reduce the level of industrial injuries and the number of accidents, improve working conditions and reduce the risk of occupational diseases is conducted in three main areas:

- internal and external audits, design and implementation of corrective actions;
- implementation of divisional programmes to reduce injury rate and risk of occupational diseases;
- implementation of annual action plans to improve the working conditions of workers.

[32] For more information see the Chapter 'Employees' of this Report.

Taking into account the fact that the main cause of industrial injuries is the misconduct of employees in the framework of compliance with HSE requirements, the Company conducts comprehensive behavioural safety audits.

All production facilities develop plans to reduce harmful and hazardous production factors in the workplace, determine responsible and deadlines. Plans are being negotiated with trade unions and approved by top managers. **GRI 103, HKEx KPI B2.3**

Production facilities with the rise in the injury rate introduced a special regime of work, which includes daily control in the form of photo reports about detected violations and their elimination.

The Russian sites of the Company's production facilities, in accordance with the requirements of Russian law, carry out a special assessment of working conditions (hereinafter the special assessment). An internal document has been issued, namely the regulation on organisation and conduct of a special assessment of working conditions at the production facilities of the Company located in the Russian Federation, which takes into account the specifics of certain production sites of the Company.

In 2017, special assessment was carried out in 37 business units of UC RUSAL, the working conditions were assessed at 4,352 workplaces. The inspection of the working conditions covered 7855 employees of the Company. Special assessment was held earlier on other workplaces. Thus, for the entire Company in 2017 all workplaces in production were assessed. The special assessment process identified, including, but not limited to, occupations with high risk of injury corresponding to class 3 of hazard with high risk of injuries and incidence of disease. **GRI 403-3**

Occupations with high risk of injury	Occupations with high risk of incidence of disease
• stope miner • anode operator in aluminium production • casting operator of non-ferrous metals • cell operator of molten salts • maintenance technician • electrical fitter • electrician • electric and gas welder	• cell operator of molten salts • crane operator • casting operator • assembler of cell repair • fitter • operator of operating console

Target projects

The following programmes have been implemented at certain Company's production facilities in addition to annual injury reduction programmes:

- Chess Board is the project that aims at minimising hazardous production factors. It provides for early identification of problem areas, risk calculation, prevention of possible accidents;
- Safe Mine is the project to reduce the risks resulting from the rockfall;
- standardisation of workplaces in the Company's current production system;
- comprehensive programmes to reduce injuries and risk of occupational diseases at the production facilities of the aluminium division;
- detection, registration and removal of hazardous situations and the prevention of hazardous activities at the Volgograd aluminium smelter;

- provision of transport safety (pedestrians, motor vehicles and floor technological transport).

For several years, the Improvement of the Year competition has been held at the Company's production facilities to improve production and business processes. One of the four nominations, 'Safety', focuses on employee projects aimed at improving working conditions and securing safe working practices.

Performance results HKEx KPI B2.3

As a guideline for the collection, preparation and provision of the relevant information, UC RUSAL applies the Regulation on the unified HSE reporting. In accordance with this Regulation, accidents are recorded in six groups: from dangerous situations to fatal accidents. Micro traumas and the medical treatment of the workers are also recorded. Statistics for the reporting period to date is automatically consolidated within the production facility, then within the divisions and the Company as a whole.

In order to achieve the best HSE results, UC RUSAL is actively working with government authorities and expert organisations, and the professionals and managers of the Company participate in the legislative process.

Among the key performance indicators in the area of HSE, the Company highlights:

- fatalities;
- lost time accident frequency rate (LTAFR);
- lost time incident severity rate (LTISR);
- accidents due to the violation of industrial safety requirements.

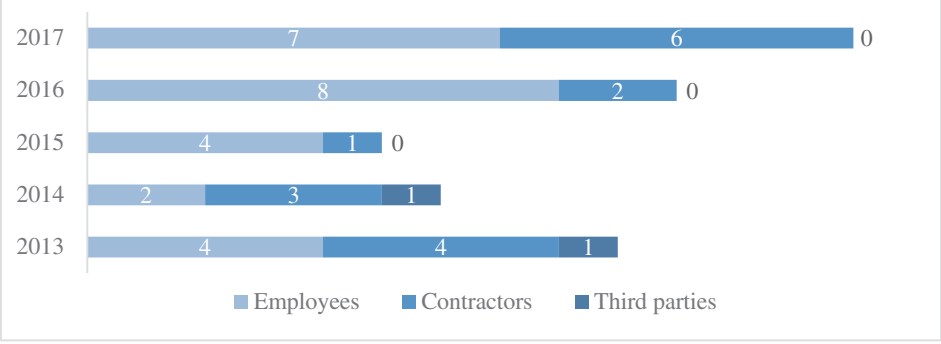
The expenditures for health & safety measures in 2017 exceeded USD 78 million. About 25% of this amount is used for the acquisition of personal protective equipment (PPE).

Continuous work on the implementation of measures aimed at the optimisation of the Company's activities in HSE area allows to achieve positive results.

2017 saw a decrease in injury rate (LTAFR) to 0.15 compared to 0.18 in 2016. The total number of fatalities among employees has decreased from 8 to 7 but increased among contractors[33] from 2 to 6 cases. The number of fatal injuries among third parties has remained null for three years.

The main causes of fatalities in the workplace continue to be the violation by the workers of work safety requirements in performing works and personal negligence.

Number of fatal accidents



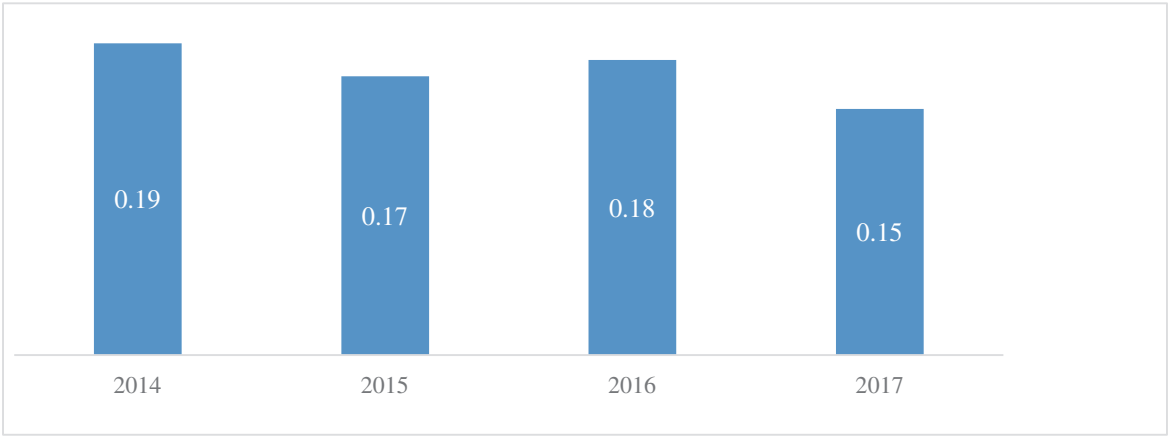
[33] For more details about the requirements to the contractors in terms of compliance with HSE please see Supply Chain section.

The Company continuously conducts performance monitoring in accordance with indicators:

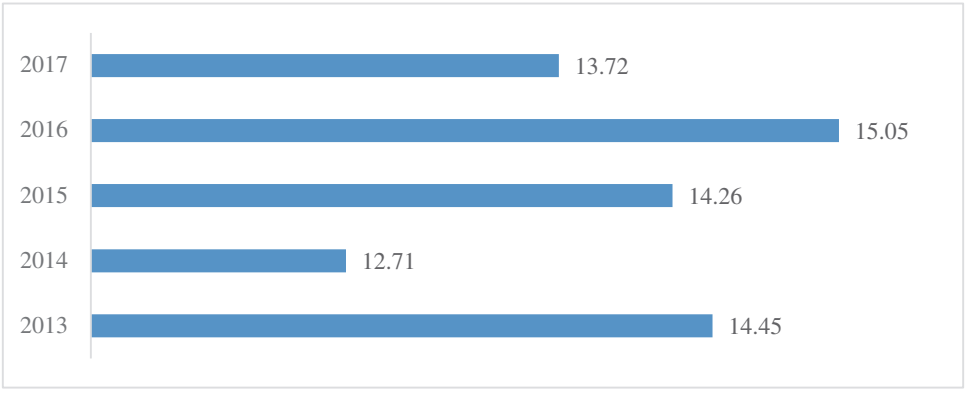
- lost time accident frequency rate;
- lost time incident severity rate. **GRI 403-2, HKEx KPI B2.1**

In 2017, the Lost Time Accident Frequency Rate decreased compared to the previous period from 0.18 to 0.15 (calculated per 200,000 man-hours), but did not exceed the target value of 0.20 and continues to be at the level of the best indicators in the aluminium industry. The lost time incident severity rate also decreased from 15.05 to 13.72 and did not exceed the target value of 14.50 for 2017.

Lost time accident frequency rate among employees GRI 403-3



Lost time incident severity rate among employees GRI 403-3



According to the data of the International Aluminium Institute, UC RUSAL shows the lowest rate of injury among the largest companies in the industry.

As in the previous period, there were no accidents and fires at the production facilities, the effects of which could significantly affect the production of finished products (10% and more of the annual production plan), confirming high degree of efficiency of the industrial and fire safety system.

The qualitative and quantitative evaluation of the results of HSE activities is conducted each semester at the meeting of the specialised committee of the Board of Directors. The injuries are analysed not only by the employees of the Company, but also by contractors who provide services to the Company and third parties.

Causes of accidents

The Company keeps mandatory records of fatal accidents, conducts internal investigations of incidents and analyses the reasons for each.

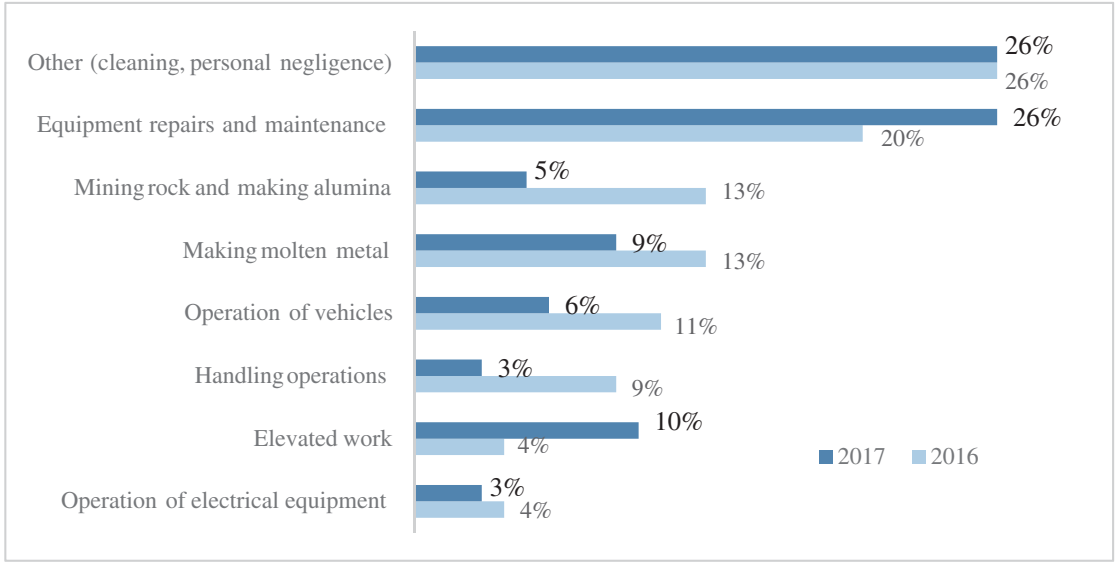
The process of identifying, investigating, recording and detecting the causes of accidents in the Company is carried out in accordance with the regulation on internal investigation and analysis of accidents in the area of occupational health, industrial and fire safety. After each incident, the employees of the Company are notified by the corporate information system, investigation is conducted, root causes are identified, a corrective action plan is prepared for their elimination and a report on lessons learned is drafted. The regulation is a universal instrument in the investigation of accidents in the countries, where local law is not sufficiently consistent with best world practice. However, a mandatory requirement within the HSE management system is the implementation of the legislation of the regions and countries, where the production capacities of UC RUSAL are located.

During the Reporting Period, the main efforts in the planning of injury minimisation were applied in the areas of production, where the highest number of accidents was reported.

In 2017, the violation by the victims of work safety rules and personal negligence continued to be the main cause of injuries. The injury rate of works at heights registered a negative trend (10% in 2017 compared to 4% in 2016). In addition, the rate of injury in the melting, quarrying and alumina production decreased for two consecutive years (from 13% in 2016 to 9% in 2017). Slightly increased the injury rate in the process of repair and installation of equipment.

Accident analysis shows that most of the accidents occur because of a conscious lack of compliance or direct violation by the workers of work safety requirements, misunderstanding of the situation, and inadequate risk assessment. This is true for both new workers and experienced professionals. Occupational injuries are most common for workers with up to 5 years of work experience and those who have worked for more than 10 years.

Areas of production and hazardous conditions, in which accidents have occurred



OCCUPATIONAL MEDICINE

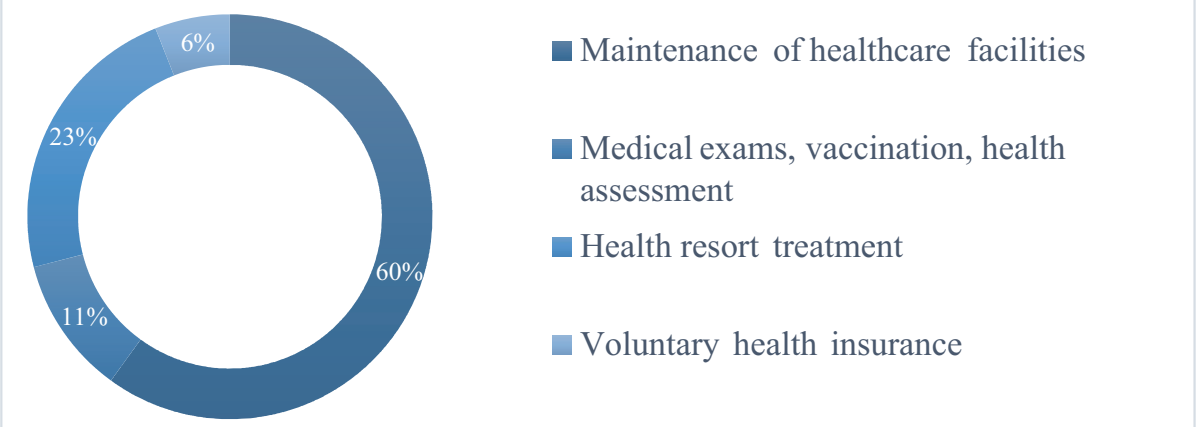
The main focus of occupational medicine is the prevention of occupational and production-related diseases and the implementation of measures to maintain and improve the health of the workers.

The prevention of occupational diseases is carried out through the introduction of progressive technologies for the protection of the environment and the use of high quality personal protection equipment that has been certified.

Own medical service RUSAL Medical Centre (RMC) plays a leading role in the prevention of non-industrial accidents. The main task of RMC is to provide highly qualified medical, preventive and emergency care and to conduct periodic medical examinations in accordance with the legislation of the Russian Federation.

RMC manages a network of 13 medical institutions located in the 9 regions of the Company's operation and services over 45,000 people. Treatment facilities of RMC have 560 employees. The Company's health costs in 2017 increased by 4% and were of RUB 786.9 million. Most of these funds have traditionally been used for the maintenance of health care facilities. The Company's health care services also operate in Guinea, Guyana and Nigeria.

Company's health expenditures, RUB million



The main activity of RMC includes curative and preventive measures to reduce the risk of sudden death in the workplace for somatic reasons, the prevention of heat strokes, as well as the pre-shift medical examinations of staff included in risk groups for health reasons. Employees of production facilities are also treated by third-party medical specialists to prevent diseases.

Not only the employees of the Company but also the residents of the regions of its operation with a VMS policy can get assistance at the RMC.

The Company implements together with Rospotrebnadzor, the Social Security Fund and the regional centres of occupational pathology a Comprehensive Interdepartmental Programme for the Management of Occupational Hazards. The programme includes the following measures: **GRI 401-2**

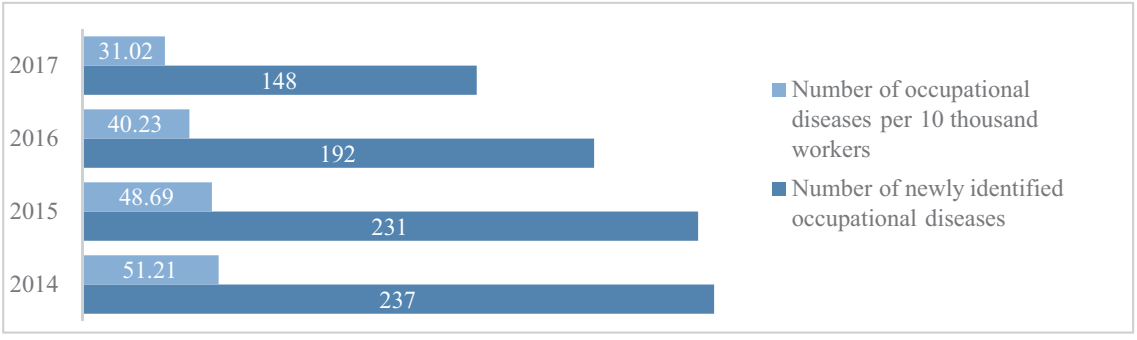
- drafting of the summary production characteristic;
- industrial hygiene and health risk assessment in each workplace;
- special assessment of working conditions;

- medical examinations at the workplace (with the participation of RMC, municipal clinics and occupational pathology centres);
- preventive health care (vaccinations, etc.) and emergency *medical assistance*;
- health and social programmes and programmes of healthy lifestyle;
- scientific and methodological work to examine the impact of hazardous and harmful production factors on workers' health and effective prevention;
- analysis of employees' health condition and the relevant adjustment of the Programme.

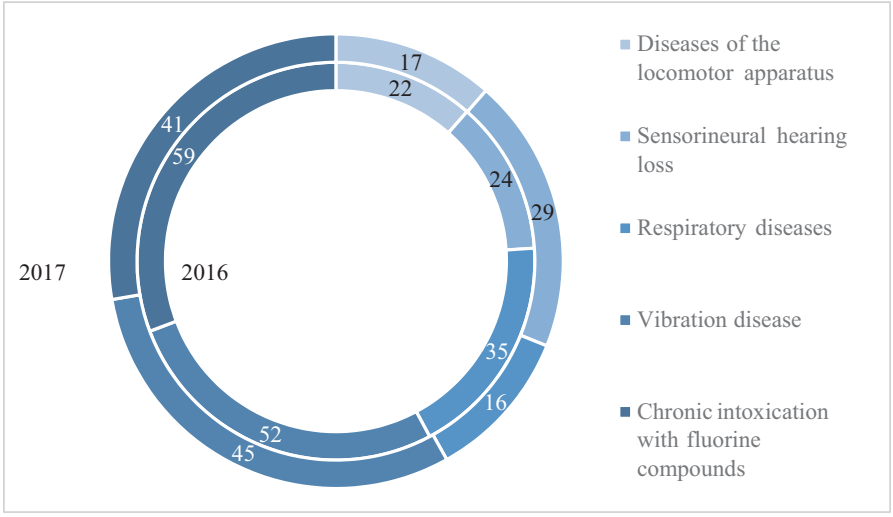
In 2017, this work was continued.

Annual vaccinations of employees are carried out at the Company's production facilities in order to prevent respiratory diseases. Flu vaccines were given to 28,632 workers, 486 employees were vaccined against pneumococcal infection, which is also a significant cause of acute respiratory infections in labour collectives. The peak of respiratory diseases falls on the epidemic season, which usually lasts from January to May. The analysis of days away from work during this period showed a decrease in the average duration of one case of respiratory disease. The incidence of occupational diseases has improved during the reporting period. The number of newly discovered occupational diseases has decreased by 22.9% compared with the previous period, and the number of occupational diseases per 10 employees dropped by 22.9%. In 2017, these figures amounted to 148 and 31.02 cases, respectively.

Dynamics of the number of occupational diseases GRI 403-2



Structure of occupational diseases, cases GRI 403-3



The structure of occupational diseases continues to be the dominated by vibration syndrome (30%) and chronic intoxication by fluorine compounds (28%).

The structure of overall diseases remains almost unchanged. The main reasons for the temporary disability are: respiratory illnesses (38%), diseases of the locomotor apparatus (25%), injuries (17%).

Fight against Ebola in the Republic of Guinea

Having achieved positive results in the fight against the Ebola virus in Guinea, UC RUSAL continues to take an active part in the improvement of health care in this country. The research and clinical diagnostic centre for epidemiology and microbiology, which has been opened in Guinea with the support of UC RUSAL, is one of the most advanced healthcare institutions to deal with acute viral diseases in West Africa. The Centre's premises include an infection hospital, a provisional hospital, a mobile laboratory and a blood and plasma transfusion department with a laboratory. Throughout its operation during the period of the Ebola epidemic, the Centre has shown the best performance in terms of the share of recovered in Guinea: 62.5% of patients of the centre with confirmed Ebola diagnosis have been treated successfully.

In February 2017, on the premises of the Centre a unique research laboratory was opened to treat especially dangerous infections, providing a high degree of protection in laboratory research (Biosafety level 3 according to international classification).

In the framework of public private partnership of UC RUSAL and the Federal Service on Surveillance for Consumer rights protection and human well-being of the Russian Federation (Rospotrebnadzor), some of the premises were converted into a high-tech laboratory complex allowing ro carry out laboratory analyses with high level of protection. The conversion of part of the premises was performed by UC RUSAL in the shortest possible time in compliance with all international sanitary and epidemiological standards and recommendations of leading engineers from Rospotrebnadzor. UC RUSAL has also provided key assistance in the delivery and installation of precision equipment for the laboratory, weighing more than 50 tonnes.

In August 2017 the Centre began a post-approval studies of the Russian drug against Ebola GamEvak-Combi. The testing programme includes the vaccination of volunteers and monitoring of their health and immune development during one year. Preclinical and clinical studies of the vaccine have demonstrated its safety and more effective stimulation of the immune system compared to foreign analogues. In addition, one of the main advantages of the Russian vaccine is the easier storage mode. The confirmation of the effectiveness of the vaccine in the course of testing will allow using it worldwide to prevent the spread of the deadly fever.

Currently, the Centre is a leading centre for the study and prevention of infectious diseases in Guinea, as well as a training centre for the national epidemiologists.

In the near future, the laboratory created on the premises of the Centre together with the Institute of biological research of Guinea (IRBAG, Kindia) will be part of the Russian-Guinean research centre of epidemiology and prevention of infectious diseases. The new laboratory will allow prompt diagnostics of particularly dangerous infections that will lead the national sanitary system in the Republic of Guinea on a whole new level.

Plan performance for 2017 and medium term plans[34]

The Company plans to develop its proactive work to improve the Health & Safety management system. Work in this area will continue next year with an emphasis on Implementation of preventive approach to the protection and promotion of workers' health.

Actions	Status
Complete standardisation of jobs in the production system, including working conditions and safety of performed operations	The volume planned for 2017 was 100% completed
Universal behavioural safety audit	Conducted on an ongoing basis
Forming and developing the culture of leadership and personal commitment to job safety	Conducted on an ongoing basis
Implementation of preventive approach to the protection and promotion of workers' health	Conducted on an ongoing basis
Finding out system (root) causes in the course of internal investigation of injuries	In 2017, 100% of cases were completed
Enhancement of responsibility (and motivation) of managers, specialists and clerks for monitoring high-risk work	Conducted on an ongoing basis
Increased control of the safe performance of the works by contractors;	Conducted on an ongoing basis
Special assessment of the working conditions of the main workers until December 31, 2017	The volume planned for 2017 was 100% completed
Promotion of Company's image in the area of HSE in the mass media	In 2017, 2 articles were published in the magazine 'Work Safety and Social insurance'
Development of the HSE Strategy of the Company until 2022	The draft of the HSE Strategy of the Company until 2022 and the plan for its implementation were developed

The Company's safety benchmarks are defined annually. After a detailed qualitative and quantitative analysis of the injury rate, pursuant to the internal order of the Company targets for the following year are generated and approved. Also as part of the monthly report, the work safety service of the production facilities monitor and analyse so-called 'leading' indicators (number of hazardous situations, hazardous activities, potential damage).

Among the Company's long-term work safety objectives is the reduction of the injury rate to 0.16.

[34] The plan was approved by the HSE Committee of the Board of Directors of the Company on June 20, 2014.

UC RUSAL objectives in the area of health and safety

	Goal 2017	Fact 2017	Goal 2018
Number of workers who died in the occupational accidents	0	7	0
Lost Time Accident Frequency Rate (LTAFR)	0.20	0.15	0.19
Lost Time Incident Severity Rate (LTISR)	14.50	13.72	14.00
Number of accidents/fires whose effects will significantly affect the production of finished products	0	0	0

8. EMPLOYEES

MANAGEMENT APPROACH

UC RUSAL HR policy is based on the principle of partnership between the employees and the employer and aims at creating a corporate environment that is encouraging the dynamic development of the Company. The strategic goal of UC RUSAL and its group companies is to be a better employer, a company that has a professional team, results-oriented and open to new opportunities. Proactive, energetic and highly educated people are the most valuable asset of the Company.

The HR policy and the Code of Ethics set out the main corporate principles, including:

- compliance with the requirements of labour laws of the countries of operation;
- adherence to high ethical standards of business practice;
- equal rights and opportunities for workers, non-discrimination on any grounds, waiver of child and forced labour;
- creation of conditions for the development of workers' potential and the realisation of their professional ambitions with the best advanced teaching methods;
- fair and comprehensive evaluation of staff performance, objectivity and openness of procedures;
- consistent approach to remuneration.

SOCIAL PARTNERSHIP

UC RUSAL and its group companies provide benefits and social guarantees, the volume of which is determined with the active participation of trade unions. Collective bargain agreements (in Russia) and similar agreements in other countries of operation regulate such matters as hours of work and rest, health and safety of workers, wage system, social guarantees and benefits, partnership with trade unions.

The leaders of trade union organisations have the right to exercise trade union control over employers and officials with labour legislation, including matters relating to employment contract (agreement), hours of work and rest, wage system, guarantees, allowances and benefits and other social and labour matters, and represent the workers in the relevant authorities.

In Russia, collective bargain agreements are made at most of the Company's production facilities. About 60% of the Company's employees are members of trade union organisations, with 95% of employees working under the terms of collective bargain agreements. **GRI 102-41**

The working body of the social partnership is the UC RUSAL Social Council, which annually evaluates the results of the social partnership, discusses the Company's work and plans, performance of the terms of the collective bargain agreement on the part of the employer and other matters. The meetings of the Social Council are one of the mechanisms to make the Company's leadership aware of the needs of labour collectives and to take them into account in the decision-making process.

EMPLOYEE COMMUNICATION MECHANISMS

Employees can contact the direct supervisor, the authorised representatives of the labour collectives, the leadership of the production facilities in where they work, or the management company with questions, complaints and proposals relating to labour relations. To do so, they can use the different mechanisms and forms of communication listed below:

- The managers of the production facilities hold regular (weekly/monthly) meetings with workers and review personal matters.
- On a monthly basis, 'information days' are held at the production facilities with the participation of management, and employees are given the opportunity to get answers to questions on different topics.
- Employees can send electronic messages through their account, call the hotline, or use a box for written communications located at the entrance to the production facility.
- In emergency and contingency cases, employees can contact 24-hour services at the corporate phone numbers of the dispatchers of fire service and the Production Control Unit of the production facility (relevant numbers are located in the Company's corporate portal and on the information boards of the Business Units).
- Orientation programme is carried out monthly for newly recruited staff, in which they are also informed about the possibilities of protecting their rights and communicating their questions.
- Employees may make contact through trade unions or trade union delegates (in foreign countries), as well as through corporate ethics officers.
- The collective bargain reporting meetings are held annually. Employees' representatives are involved for the renewal/signing of the collective bargain agreement, and joint discussions are held about the articles of the collective bargain agreement. Business leaders meet with trade union leaders representing the interests of employees to address specific issues.
- In foreign countries (Guyana, Guinea), the issues of interest for the employees are discussed during meetings of the leadership of production facilities with the local communities.
- Information on changes in labour legislation is posted in the corporate portal and on the information boards of production facilities.
- The minimum period of notification to the employees about significant changes in the activity of the production facilities is defined by national law.

The information obtained by the Company using these communication mechanisms is communicated to the leadership of the production facilities and the Management Company if the situation requires the involvement of the leadership, as well as in the framework of the annual reporting process.

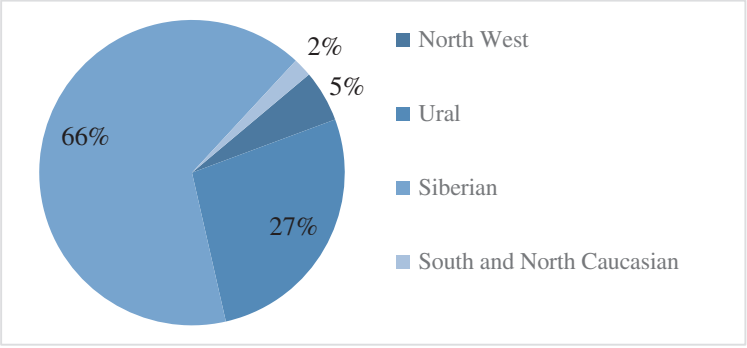
In cases of a dispute arising between the employee and the leadership of the production facilities, the leadership strives to resolve the conflict by negotiations. Individual disputes, where the employee and the employer fail to settle differences by negotiations, are considered by the Labour Disputes Commissions (LDC). They are composed of the representatives of the HR Directorate, the Legal Department, and member(s) of trade union. The Commission considers the application within 10 calendar days from the date of the worker's application in the presence of the employee, decision is taken in the form of minutes of meetings, a copy of which is released to the worker with the acknowledgment of receipt. The decision of the LDC is binding and is executed by the employer within three days of the date of its entry into force. The Company does not apply prosecution or other pressure to its employees who have used the complaint and communication mechanisms.

Quantitative methods of evaluation (face-to-face surveys, questionnaires, computer surveys) are being used to monitor the level of satisfaction/involvement of staff at the production facilities. Employees are asked to evaluate working conditions, training programmes, quality of services provided by the medical centre or the catering operator.

STAFF STRUCTURE AND PERSONNEL MOVEMENT

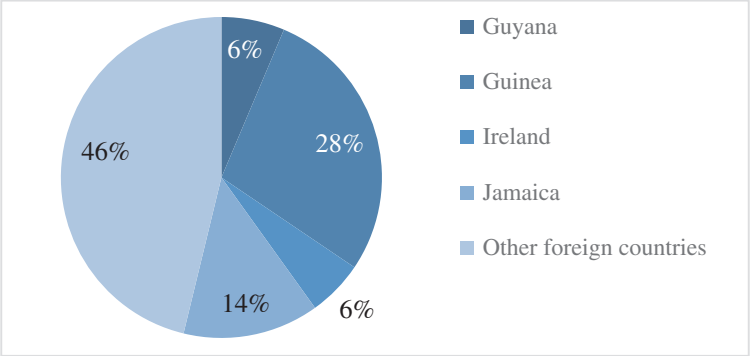
The average number of employees at all UC RUSAL production sites has remained stable over the past years. The majority of the employees are employed in three divisions: Aluminium, Alumina and Engineering and Construction. About 90% of workers[35] are employed in significant regions. The most labour collectives work is in the Ural and Siberian federal districts in Russia, and in Guinea abroad. Almost 100% of the employees is employed on a full-time basis.

Significant regions of operation in Russia (federal districts) in 2017, %



[35] Significant regions mean the regions, in which production facilities with more than 500 employees operate.

Significant regions of operation abroad in 2017, %



Staff description

Indicators	2014	2015	2016	2017
Average headcount, persons	61,235	60,758	61,088	62,020
Labour turnover, %	7.2	7.8	8.9	10.2
Share of part-time employees, %	1.1	1.0	0.2	0.2
Share of freelance employees, %	1.4	0.8	0.4	0.5
Proportion of workers to white collar workers, % to %	81.9 to 18,1	81.6 to 18.4	81.1 to 18.9	80.2 to 19.8
Share of men, %	over 85	over 85	77.4	78
Share of senior and middle-level managers recruited from the local population (at overseas assets)	90	91.2	93	92.3

The turnover rate for the past several years has increased slightly (mainly due to the closing/mothballing of inefficient production facilities).

Given the specific nature of the Company's operations, the majority of employees are men (78%) at both Russian and overseas production facilities.

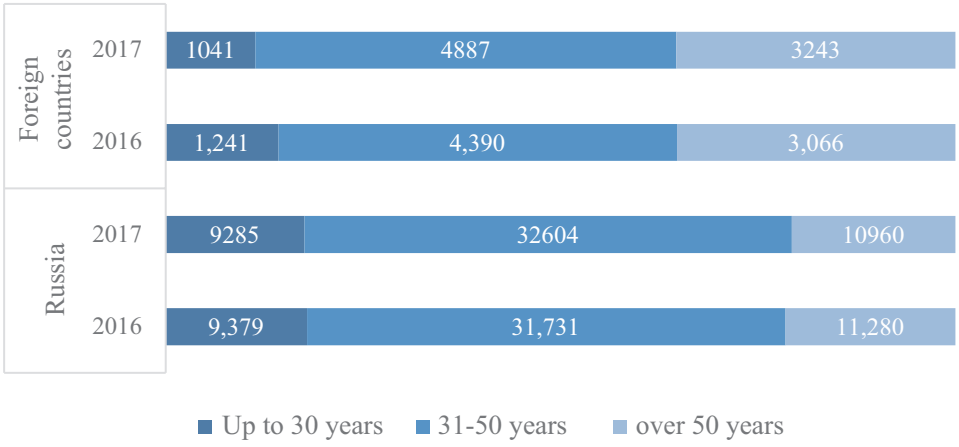
Gender composition of staff, %

	2014	2015	2016	2017
Composition of management (senior management)				
Men	91	86	84	84.4
Women	9	14	16	15.6
Composition of management (excluding senior management)				
Men	85	84	82	82.3
Women	15	16	18	17.7

Staff structure, persons

	Russia		Foreign countries	
	2016	**2017**	**2016**	**2017**
Average headcount	52,390	52,849	8,698	9,171
– broken down by sex				
male	39,170	40,353	6,903	7926
female	13,220	12,496	1,795	1245
– broken down by type of employment				
full-time	52,283	52,746	8,668	9,142
part-time	107	103	30	29
– broken down by employment contract				
permanent contract	50,198	50,631	7,568	8,170
fixed-term contract	2,192	2,218	1,130	1,001
– broken down by category				
White collar staff	9,620	10,028	2,015	2,228
workers	42,770	42,821	6,683	6,943

Structure of staff by age, persons



Total number and sTotal number and share of newly recruited staff as well as turnover of personnel by age group in 2017

Indicator	Age	Russia		Foreign countries	
	years	2016	2017	2016	2017
Total number of new staff that joined the Company during the reporting period, persons	< 30	2,157	3,214	279	333
	30-50	2,630	3,827	245	352
	> 50	437	546	45	92
Total number of new employees who left the Company during the reporting period, persons	< 30	428	614	46	66
	30-50	547	576	24	52
	> 50	154	164	11	12
Share of new employees who have left the Company during the reporting period, %	< 30	20%	19%	16%	20%
	30-50	21%	15%	10%	15%
	> 50	35%	30%	24%	13%

PROVISION WITH LABOUR RESOURCES

The selection of highly qualified staff capable of fulfilling the strategic objectives of the Company is a special priority in the operation of UC RUSAL. The Company uses a comprehensive approach, involving vocational guidance among pupils, interacting with specialised higher and secondary specialised educational institutions, search for the employees with adequate skills in international markets, and improving the skills and motivation of existing employees.

At all production facilities, regardless of their country of residence, the Company applies common approaches and staff selection principles. The staff selection system is based on the evaluation of the candidate's set of competencies and personal characteristics. Within the framework of the professional selection the skills and ability to cope with the assigned tasks is tested, helping to determine the future professional suitability of the candidate. All candidates, regardless of the position to which they aspire, are interviewed face-to-face in each country of UC RUSAL operation.

An open employment policy has a positive impact on international labour markets, given the large number of projects that are implemented in Company that require different analysts.

Interaction with educational institutions

UC RUSAL cooperates with educational institutions that provide training to mining and metallurgical professionals to create an external talent pool. In the course of training, the students not only acquire knowledge at the university or college but also acquire experience and useful skills at the production facilities of the Company. The following programmes are aimed at the preparing of future specialists:

- targeted selection and scholarships for students;
- international educational programmes.

Programme for targeted student selection

The targeted selection programme is aimed at providing production facilities with a talent pool of skilled young engineers. Over RUB 6 million are allocated annually for the implementation of the programme.

The programme provides an opportunity for school graduates to apply for and study at the university in the Company-relevant specialties. The curriculum includes an in-depth study of general subjects and additional subjects, scientific work, as well as sessions at the production facilities of the Company in occupational health and safety, UC RUSAL Business System and the Code of Ethics. The participants of the programme undergo internships at the production facilities annually.

Upon the nomination of the leadership of the educational institutions the most talented and excellent students who actively participate in the scientific and technical activities become the holders of UC RUSAL scholarship. The amount of the scholarship depends on the academic progress and can be of up to RUB 5,000 per month. In addition, students are paid accommodation in the dormitory for the entire period of their studies, as well as a compensation for the travel to and from the place of residence and place of internship at the production facility. At the end of the training, young professionals will have to work for at least three years at the UC RUSAL companies in their cities.

As of the end of 2017, 58 new contracts were executed for the provision of target spots for students of higher and secondary special educational institutions in relevant professions and areas of training.

With the aim of improving the quality of training of students of the relevant professions and areas of training, as well as the involvement of talented students in project activities in priority areas of development of the Company in 2017, the project ‘Corporate centre of youth initiatives ‘RUSAL Laboratory’ was launched. To date, agreements have been reached on the opening of such laboratories with the Siberian Federal University, Irkutsk State Technical University, Siberian State Industrial University, Volgograd State Technical University and National University of Science and Technology (MISiS).

Number of students studying under the Targeted Selection Programme, persons

Educational institutions	2014	2015	2016	2017
Siberian Federal University (students from Krasnoyarsk and Sayanogorsk)	31	51	44	51
Irkutsk State Technical University (students from Bratsk and Irkutsk)	9	18	16	12
Ural Federal University (students from Kamensk-Uralsky and Krasnoturyinsk)	4	14	6	6
Siberian State Industrial University (students from Novokuznetsk)	4	4	15	5
Ural State Mining University (students from Severouralsk)	4	4	16	20
Kamensk-Uralsky Polytechnical College (students from Kamensk-Uralsky)	–	25	18	20
Krasnoyarsk Industrial Metallurgical College (students from Krasnoyarsk)	11	5	11	15
Volgograd State Technical University (students from Volgograd)	–	–	9	14
Volgograd Management and New Technologies College	–	–	–	25
Total	**63**	**121**	**135**	**168**
Completed training and came to production	**–**	**–**	**10**	**25**

Thanks to the careful training of the young steel workers, the production facilities of the Company receives specialists who, when they start to work, are ready at once to participate in the solution of strategic tasks, make proposals for the development of production and introduce high-tech technology.

In 2017, 25 new graduates of the Targeted Selection Programme began to work in the Company.

International training programme for students from Guinea, Guyana and Jamaica

UC RUSAL is implementing an international educational programme to train the local labour of Guinea, Guyana and Jamaica. Under the programme, young people between the ages of 18 and 35 are enrolled in leading Russian universities: People's Friendship University of Russia, Moscow State University of communication routes, Siberian Federal University, Ural Federal University and Ural State Mining University. The Company undertakes all costs related to their education and staying, organises the internship at its production facilities in Russia and employs them at UC RUSAL production sites in their home country after graduation.

Every year, students undergo internship at the production facilities of the alumina division of Russia for not less than a month. This allows them to study the production technology, business system and corporate culture of the Company.

In 2017, the first graduation of the students trained under UC RUSAL International Programme took place; training was completed by 15 people: 13 citizens of Guinea and two of Guyana. They are already employed at the foreign production facilities. In 2018 a new admission is planned under the '100 Guinea Students' programme. **HKEx KPI B1**

Number of students enrolled in the International Education Programme, persons.

	2016	2017
Total persons, including:	**118**	**98**
Students from Guinea	85	67
Students from Guyana	5	3
Students from Jamaica	28	28

Educational project 'UC RUSAL to the Russian Schools'

Educational project 'UC RUSAL to the Russian Schools' (http://sdorsr.rusal.ru) is based on distance learning system of the Company and ensures the functioning of the system of continuous education 'school – educational institution for vocational training – industrial production facility'. Computer courses and textbooks published online (including those developed by the teachers of the Corporate University) can be used in the educational process by the teachers of schools, colleges and universities. The project contributes to the implementation of the principle of 'education throughout life' expanding the amount current knowledge and skills of the pupils and students.

Currently, all educational institutions of general and continuing education of Novokuznetsk (more than 100 educational institutions), Bratsk (34 educational institutions), Krasnoturyinsk (14 educational institutions), Moscow school No 2086, four colleges, four universities in Irkutsk, Krasnoturyinsk, Krasnoyarsk and Novokuznetsk, participate in the programme.

In 2017, the undisputed leader of the programme of 'UC RUSAL to the Russian Schools' was the boarding school No 38 of Novokuznetsk. The technology of e-learning of UC RUSAL is actively used at the Education Development Centre and the Youth Centre of the city of Bratsk, Moscow school No 2086, Krasnoturinsk Polytechnic School

Number of educational institutions participating in the programme of 'UC RUSAL to the Russian Schools'

2015	2016	2017
142	178	182

Programme of renewal and rejuvenation of staff structure 'New Generation'

'New Generation' is a programme of in-depth adaptation of young specialists employed under fixed-term employment contract for 3/6 months. It is aimed at the renewal and rejuvenation of staff structure of the Company by hiring young professionals for the posts and professions that are not covered by the programmes of formation and development of internal talent pool, and leadership positions for rare (specialised) and demanded in the local labour market specialties.

The number of participants of the 'New Generation' programme, persons:

	2017
Total, including:	**195**
Employed	127
Internship	46
Dismissed	22

Internal talent pool

The Talent Pool programme is aimed at achieving the critical strategic goal of UC RUSAL: to prepare a pool of professional, highly qualified employees for all managerial positions. **GRI 404-2**

The execution of the programme is supervised by the shareholders. A list of key positions that have a maximum impact on the performance of the Company has been approved. These positions are being assessed to determine the risk of vacancies. A competency scale has been developed to determine the level of readiness of the succession candidate to work in a higher position. Individual development plans are prepared for the candidates for these positions. For the middle and lower level talent pool (for positions of line managers), a line of requirements is also developed, their professional knowledge and the level of development of managerial competencies are assessed.

Succession candidates improve competencies such as 'formation of professional team', 'cooperation and collaboration', 'business thinking', 'achieving results', 'striving for improvements', etc. The training of the talent pool is diversified by management levels.

In 2017, the number of succession candidates with new assignments increased by several times in comparison to the previous period, indicating an activation of the Company's management renewal processes. In the framework of functional education and training of the talent pool in the process of practical performance by them of specific official duties 770 training sessions were conducted for talent pool candidates, including 64 interdivisional internships.

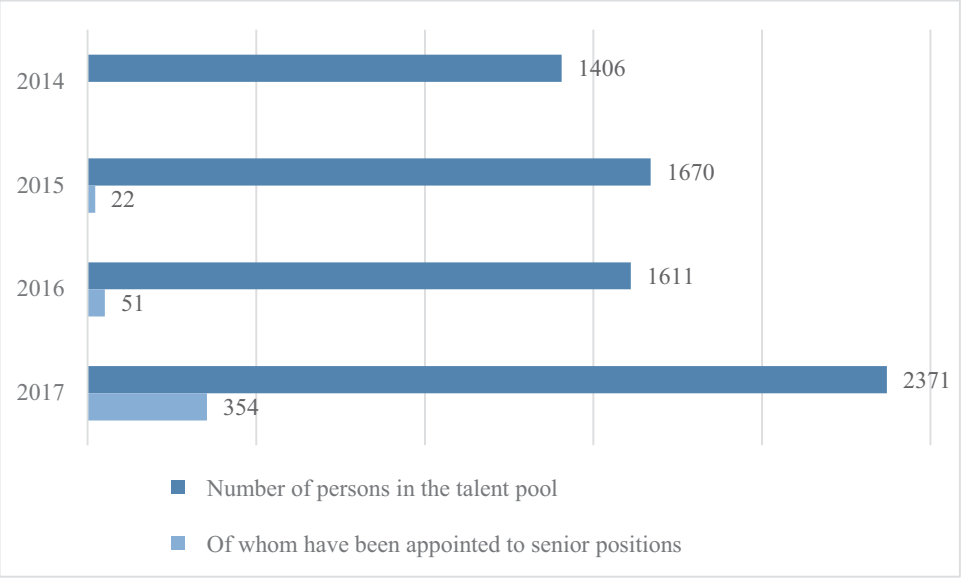
In 2017, training in managerial skills was organised for the participants of the talent pool development programme 'BS-250'. There were 15 trainings organised for 254 participants.

In addition to 'vertical' development, the employees of UC RUSAL production facilities can have 'horizontal' development. The Internal Competition programme provides employees with the opportunity to rotate by production facilities. Information about open positions is regularly published on the internal information portal.

Development of managerial competencies in the talent pool in 2017

Level of position	Number of trainings		Number of people trained	
	2016	2017	2016	2017
Talent pool for the MD level	4	9	55	141
Talent pool for the Head of Business Area level	22	40	396	654
Lower talent pool levels (the rest of the line managers of the production facility)	49	59	468	833
Total persons trained	**75**	**108**	**919**	**1628**

Movement of talent pool, persons



Recruitment in foreign countries *GRI 102-8*

In foreign countries, the Company's HR policy is targeted at local residents, especially those living in close proximity to the production facilities. UC RUSAL production facilities not only provide timely information about open vacancies but also conduct preliminary training for those seeking employment. **HKEx-B1**

In Guinea, information about vacancies is proliferated through the training service, as well as in local prefectures and communes. A database of CVs of succession candidates is formed from among the local population by the training service. Teachers of local educational institutions are recruited for training, and regular internships are organised for the graduates of the educational institutions at the production sites.

In Guyana, 70% of the total number of workers hired in 2017 were recruited from nearby localities.

The information about existing vacancies is reported on a monthly basis at the meetings of production committees and is posted on the information boards of the business units. Meetings are held several times a year with residents, who, among other topics, discuss employment, as well as local labour legislation.

In-house internships are offered to enable employees to master the use of new equipment and devices and to take an open position with these skills. So, in 2017, with the assistance of contractors in-house training was conducted on welding works, on maintenance of hydraulic systems, on maintenance of internal combustion engines, training in fire safety. Also, the HR service developed and conducted training on 'The Role of the Leader in Team Management' for line managers.

The policy of dismissal and compensation in Guinea and Guyana is in line with the local law, the rules of the production facility and the agreements between trade unions and the administration of the production facility. **HKEx-B1**

In Armenia, cooperation has been established with higher and secondary vocational educational institutions. In 2017 at the ARMENAL foil mill 139 students underwent production and pre-graduation internships. New employees are also recruited through cooperation with local employment centres and recruitment agencies: vacancies are posted on the internet and in local mass media. Compliance with local labour legislation is ensured by regular monitoring of current changes by the Legal Service: officials attend training and awareness-raising seminars on labour law. **HKEx-B4.2**

EDUCATION AND DEVELOPMENT

While working in the Company, employees are given the opportunity to continue their training, which increases their demand in the labour market and helps to plan their employment in the future, given the rapid changes in technology and obsolescence of knowledge and skills by advanced production.

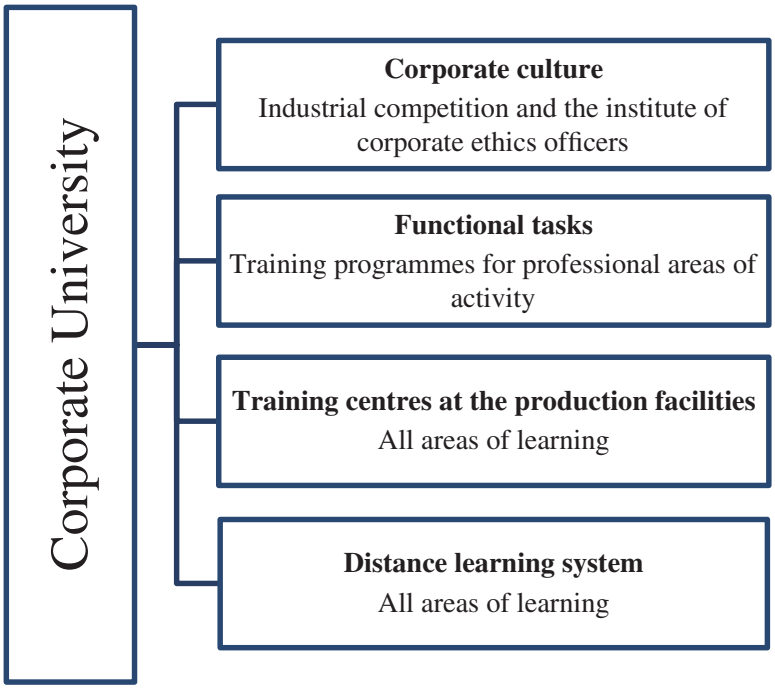
The Company uses a variety of training programmes and tools that can help improve the skills of both the employees and senior managers. **GRI 404-2**

On the other hand, cooperation programmes with specialised universities and the educational project 'UC RUSAL to Russian Schools' contribute to the improvement of the quality of general and higher education and to a more specific definition of the set of competencies that a advanced engineer should have.

The following characteristics of the employees are taken into account during training planning in order to ensure the effectiveness of the training programmes, increase the motivational impact and maximise the benefits for the Company:

- quality and performance;
- professional qualification level;
- level of education required to match the position;
- observance of corporate ethic, industrial and environmental safety standards.

The Corporate University ensures the functioning of the entire training system, develops and offers training programmes and methods that correspond to the current and future needs of the business. The Company continuously develops its personnel training systems through systematising and developing professional training of the workers and specialists, raising the relevancy of functional academies, and creating targeted modular programmes oriented to business objectives. **HKEx KPI B3**



Number of employees who have undergone various types of training HKEx KPI B3.1 (part)

	2015	2016	2017
Number of trained persons	26,392	36,595	27,646
The share of employees trained in the total number of employees, %	43.4%	60%	51%

The decline in the share of employees trained was due to natural reduction of the need for mandatory and vocational training.

The share of employees trained broken down by types of training, % of the total number of persons trained

Type of training	2015	2016	2017
Training by profession	52	54	37
Mandatory training	35	32	34
Professional development	13	14	29

Corporate training and development system of UC RUSAL

Functional academies

Functional academies give the employees the opportunity to upgrade skills in professional areas to perform their production and successful tasks successfully. Training is conducted in a variety of formats: face-to-face, remote, group, individual, training sessions of external and internal providers, internships at overseas production facilities). **GRI 404-2**

In connection with the Company's plans for the development of over 7,000 casting alloys and promotion of these alloys among consumers, in 2017 workshops were held by foreign experts from UK and Germany for the professionals of UC RUSAL (80 persons) on the topic 'Technology of direct chill casting of aluminium alloys' and 'Injection casting industry 4.0'.

Quality management is the priority topic. The share of employees trained on this topic in accordance with the programmes of functional academies in the Reporting Period made up 57%.

Number persons trained in accordance with the programmes of functional academies in 2017, persons.

Area	Number of trainees	
	2016	2017
Technology	134	161
Quality management	822	1255
Laboratory and metrology	89	67
Energy and repair	47	53
Health, safety and environment	47	55
Information technology	44	88
Project management	91	458
TIPS	–	81
Total	**1,274**	**2,218**

Modular vocational training system

UC RUSAL became the first industrial company in Russia to introduce modular training programmes to improve the professional skills of the blue-collar job in order to obtain a higher grade. Training is carried out under 35 modular programmes, including mandatory training programmes and additional programmes to upgrade skills and professional excellence. **GRI 404-2**

In 2017, the training in the TIPS methodology (theory of inventive problem solving) started. The programme consists of three core modules and is designed for 2017-2018. 226 persons will be trained under the TIPS programme.

In 2017, a two-year modular training programme for sales staff 'Marketing College' was launched. It envisages training in all major aspects of sales from marketing strategy to innovation and quality in the product line. Announced for training in 2017 – 12 persons, in 2018 – 15 persons.

Technological minimum

Currently, the technological minimum provides for the study of 6 general and 16 specialised training modules. General modules are studied depending on the level of position, and specialised depending on the belonging to a particular division or directorate.

The knowledge of the technological minimum is assessed through examination tests by means computer-based testing in distance learning system.

In 2017 knowledge assessment was prepared and tested for the following categories of employees:

- managing director/CEO/branch manager.
- head of business area of the production facility/head of unit/service, project manager directly reporting to the managing director.
- area superintendant, team leader, foreman, senior foreman.

Number of assessed employees in 2017, persons.

Total, including:	**6,626**
Technological minimum of white collar workers, persons.	3,113
Technological minimum of HR, persons.	400
Technological minimum of quality, persons.	3,113

Distance learning system

The most accessible way to upgrade skills is through distance learning, which allows staff to be trained both on-the-job and remotely.

More than 300 e-courses on management, logistics, foreign languages, time planning, presentations, stress management, office management and other topics are included in the distance learning. The courses are intended for the professionals in blue-collar jobs, management personnel and university students studying in the specialties relevant for UC RUSAL. The system allows carrying out remote tests and polls, tracking the performance of the educational process and getting feedback. **GRI 404-2** Distance learning is the platform for the implementation of the educational project 'UC RUSAL to Russian schools'.

Distant learning system (DLS)

	2015	**2016**	**2017**
Number of production facilities and business units using DLS	54	62	67
Number of trainees	16,693	57,257	33,649
Number of computer trainings (courses)	over 300	over 400	over 500

Simulators

One advanced way of learning is a simulator that reproduces various process operations. Training on simulators has a significant impact on both the newly employed and experienced employees. Many aluminium smelters are already using simulators to train operators of the bridge crane and loader. Virtual simulators are available in the DLS, some of which are created by the employees themselves.

Emulators, special computer programmes that simulate certain process operations on the display, are also widely used in the corporate learning system. The computer keeps track of whether the worker is performing the tasks correctly and in a timely manner, and gives a signal in case of error. The simulators can also be used by the students of the 'UC RUSAL to Russian Schools' project, which is an important part of the preparation for the on-the-job training.

The development of equipment and software based on the real production of UC RUSAL is a significant area of the corporate learning system. In 2017 an interactive simulator was developed for Bogoslovskaya Central Heating and Power Plant.

Training of workers in higher education institutions

The employees of UC RUSAL companies are given the opportunity to obtain higher education at the specialised universities and to become members of the Presidential Programme, state programme of preparation of administrative staff for business entities, which has been implemented in Russia since 1998 according to the Decree of the Russian President and the Decree of the Government of the Russian Federation. **GRI 404-2**

Thus 110 employees were trained in 2017 at the Ural State Mining University under Bachelor's programmes. In the same year the specialised department of the Siberian Federal University for the Alumina Division was opened in Achinsk. The specialised department of 'Metallurgy of Light Metals' continued to operate at the Irkutsk State Technical University. At this university and at the Ural Federal University mandatory Master's programmes started for the employees of the Company.

In 2017, to train to work on the non-destructive inspection trolley of the employees of the service of rail monitoring of the Compagnie des Bauxites de Kindia from the Republic of Guinea, the teachers of St. Petersburg university of communication routes. For the training of mechanics of the service of repair of locomotives after the installation of the complex of resistance tests 'KIPARIS 5', stands for the testing of high pressure fuel pumps and train-stop equipment, teachers of the Research Institute of Technology, Inspection and Diagnostics of Railway Transport (Omsk) were engaged.

Training in universities and under the Presidential Programme, persons.

Levels of education	Number of trained persons	
	2016	**2017**
Bachelor's programme	82	114
Master's programme	54	85
Specialised department	60	125
Presidential programme	50	-
Total	**246**	**324**

Plans and priorities for 2018

- In the framework of the functional academies, it is planned to train 2500 people.
- A procedure for evaluating the effectiveness of educational programmes and training courses will be introduced to improve the quality of training, and the adaptation of university programmes to meet the needs of the Company will continue.
- Special attention will be given to the training of project management and innovative cultural skills (including through the organisation of youth-oriented projects).
- It is planned to reopen the Higher Aluminium Courses for the key employees of the Aluminium Division.

- The 'New Generation' programme will continue. For 2018 the admission of 200 persons is planned.
- It is planned to develop and launch distant in-depth training programmes for process engineers on the following topics: 'aluminium production'; 'casting of aluminium and alloys'; 'carbon materials'; 'alumina production'; 'anode production'.
- The programme of scholarships, the organisation of specialised departments at production facilities will also continue.

MOTIVATION AND REMUNERATION

Salaries

The policies of the Group as to dismissal of labour, recruitment and promotion, working hours, rest periods, equal opportunity and anti-discrimination are set in the Code of Corporate Ethics, the Collective agreement, and in the Rules of internal labour regulations which comply with the respective laws and regulations in the countries in which the Group has operation.

The Group is in compliance with the relevant laws and regulations that have a significant impact on the Group in relation to dismissal of labour, recruitment and promotion, working hours, rest periods, equal opportunity and anti-discrimination.

UC RUSAL ensures its employees a stable and competitive salary and provides an expanded social package. The amount of remuneration paid to a worker depends on the level of skill and performance, the complexity of the work performed and the tasks to be solved, as well as the overall performance of the Company.

Salary consists of a fixed and variable part and is adjusted with due regard to the growth of the consumer price index (inflation) and the local labour market conditions.

The Company uses motivational systems that encourage the efficient labour of the employees: bonuses from the fund of the head of the production facility, year-end bonuses, rewarding of the employees involved in the implementation of business system development projects, improvement of the production technology and investment projects, rewarding employees who have received corporate awards, state and departmental awards, and for those who actively participate in the social projects of the production facilities.

Average salary at the Company's production facilities, USD/RUB GRI 202-1 (part)

		Company total	Russia	Foreign countries
2016	USD	942	879	1,081
	RUB	63,180	58,938	72,503
2017	USD	1,086	1,044	1,335
	RUB	63,208	60,727	77,831

Minimum wage

Subject to the performance by the employee's job duties and the completion of the monthly work time balance, the minimum wage will be set at not less than 1.5 times the subsistence level of the working population in the relevant constituent entity of the Russian Federation. For other employees, the minimum wage is equal to at least 1.3 times the subsistence level of the working population established at the federal level.

Main results in 2017

In 2017, the following key measures were undertaken:

- regulated the procedure for reimbursement of expenses to employees relocating at the request of the employer from the place of residence to another place (Relocation Regulation);
- introduced a system of setting and evaluation of personal key performance indicators of the employees;
- regulated the relationship between performance and the remuneration of the employees;
- implemented a unified hierarchical system of levels (grades) of positions of the Company, the procedure for the establishment and revision of the basic remuneration of the employees;
- implemented the balanced scorecard of effectiveness of the employees at the aluminium production facilities, which is the basis for the monthly bonus payment and promoting the improvement of product quality.

Share of employees (including managers and specialists) assessed in 2017, %

	Company total	Russia	Foreign countries
2016	84.4	83.7	94.8
2017	87	85.5	95.1

Plans for 2018

In 2018 it is planned to carry out the following significant activities:

- subject to the performance by the employee's job duties and the completion of the monthly work time balance, to ensure the minimum wage at not less than 1.7 times the subsistence level of the working population in the relevant constituent entity of the Russian Federation. For other employees, to ensure the minimum wage of at least 1.4 times the subsistence level of the working population established at the federal level.
- to implement the balanced scorecard of effectiveness of the employees at the alumina production facilities, which is the basis for the monthly bonus payment and promoting the improvement of product quality.

SOCIAL SUPPORT

UC RUSAL provides a wide range of social benefits, both statutory and auxillary, including to family members. The following benefits provided within the social package in addition to the statutory benefits, are the most relevant to the employees.

- provision of free meals to the workers;
- possibility to engage in sports and participate in sporting events;
- obtain on a preferential basis vouchers for health resort treatment and rehabilitation in sanatoriums and medical centres located in the Russian Federation (for the employees and their families);
- obtain voluntary medical insurance policies, which allow the employees to use a wide range of out-patient polyclinic and in-patient care services;
- celebration of anniversaries of the production facilities, Day of the Metal Industry and other occasions (for the employees and their families);
- financial assistance in difficult straits;
- annual New Year celebrations and gifts for children of the employees.

Main results in 2017

In general, the conditions of the Sectoral Tariff Agreement on the Mining and Metals Sector of the Russian Federation and collective bargain agreements in force at the production facilities are complied with.

Number of employees that used social programme benefits in 2017, persons.

	Russia		Foreign countries	
	2016	**2017**	**2016**	**2017**
Voluntary health insurance	1,028	898	1,424	1,457
Non-state pension insurance	83	32	909	932
Assistance in the acquisition of housing	685	660	–	—
Rehabilitation programmes	5004	3654	1034	537
Financial assistance, including one-time support upon retirement	2305	2692	385	437

Costs of collective bargaining commitments in 2017, RUB thousand

	Russia	Foreign countries
2016	3,063,102	622,170
2017	2,614,040	573,580

The above costs of collective bargaining commitments include:

- Salary adjustment
- Discount vouchers for health resort treatment
- Financial assistance upon retirement
- Financial assistance to employees and unemployed retirees of the production facility
- Cultural and sports events
- Transportation of workers to/from work
- Provision of quality free meals to the workers
- Mandatory and periodic medical examinations, medical insurance
- Compensatory payments under the housing purchase programme

In 2018, the budget for the social programme was adjusted by 4% in terms of the basic expenses affected by inflation to maintain the real content of social support for the employees:

- medical care;
- vouchers for health resort treatment for the workers and their children;
- annual New Year celebrations and gifts for children of the employees.

Bonuses to awards and other incentives

In the framework of social programmes in excess of collective bargain agreements 320 free vouchers to employees in the Imeretinskiy resort area (Sochi) were purchased in 2017 (1,303 vouchers in 2016). The duration of the holiday vouchers was of 7-14 days.

Leave entitlement

The possibility of reconciling family and work is considered by UC RUSAL an important component of social policy. The Company guarantees the granting of maternity leave until the child reaches the age of three on the application of one parent, including the father. In this case, the parent taking the leave is entitled to return to work to the same position he or she held before the leave.

Maternity and paternity leave in 2017, persons.

	Russia		**Foreign countries**	
	2016	**2017**	**2016**	**2017**
Number of employees entitled to leave, persons	1229	1011	26	52
Number of employees taking leave, persons	381	419	12	15
Number of staff members who have returned to work after leave, persons	375	326	7	28
Return to work rate, %	31%	32%	27%	54%

9. INVESTING IN THE LOCAL COMMUNITY DEVELOPMENT

MANAGEMENT APPROACH

The social investment of UC RUSAL in Russia and abroad is aimed at improving the quality of life of the residents in the territories of its operation and strengthening of the social initiative. Local community support programmes are being implemented in all territories of the Company's operation. **GRI 413-1**

The management of social investment is based on the following principles: long-term objectives, partnership with stakeholders, professional development and training of professionals and programme participants. The following areas of social investment in Russia and abroad are a higher priority for the Company: **GRI 203-2 HKEx KPI B8.1**

- social infrastructure and the urban environment;
- education;
- sport and healthy lifestyle;
- corporate and city-wide volunteering;
- social entrepreneurship;
- assistance to vulnerable groups.

Stakeholders (local authorities, public and other organisations, residents of cities and towns, local businesses, etc.) are equal participants in the social programmes of UC RUSAL, and each has mechanisms to take into account the opinions of the target audiences and to obtain feedback. The implementation of social investment programmes in Russia and abroad takes into account the cultural, national and other characteristics of local communities.

MANAGEMENT OF SOCIAL INVESTMENT IN RUSSIA

In Russia, the social investment of the Company is carried out in the form of three social programmes: **GRI 203-2, HKEx KPI B8**

- RUSAL Territory is a programme for the social and economic development of the territories of operation;
- Helping is Easy is a programme to support and develop corporate and city-wide volunteering;
- Social Entrepreneurship is a programme to support and develop small businesses with significant social impact.

For each programme, impact assessment is carried out: a number of indicators[36] is used to determine its relevance and sustainability. 100% of the programmes implemented in Russia are assessed but with varying frequency depending on the nature of the programme. **GRI 413-1**

[36] Some indicators used for the assessment are shown in this section.

The implementation of the social investment of UC RUSAL in Russia is carried out by the Centre for Social Programmes, the corporate charitable fund of the Company (hereinafter the CSP, for more details please see *http://www.fcsp.ru*), which has representation offices in most regions of the Company's operation in Russia and operates in accordance with the Development Strategy. The Social Entrepreneurship development programme is administered by ANO Centre for Innovation in Social Sphere (hereinafter the CISS).

The total budget for the financing of social programmes in Russia from UC RUSAL funds in 2017 was of RUB 101.5 million. **HKEx KPI B8.2**

Agreements with territories of operation in Russia

UC RUSAL cooperates with the state and municipal authorities of the territories of operation within Russia in the framework of the social and economic cooperation agreements. In 2017, agreements were in force with the administrations of the Kemerovo region, the Komi Republic and the Republic of Khakassia, as well as the cities of Achinsk, Bratsk and Kamensk-Uralsky. **HKEx KPI B8**

The total social investment budget under the social and economic agreements with the territories of operation in 2017 was of RUB 434.5 million. **HKEx KPI B8.**

Management of social investment outside of Russia

Social investment programmes in foreign countries varied depending on the living conditions in Jamaica (the island country south of Cuba), Guinea (West Africa), Ireland (Northern Europe) and Guyana (north-eastern part of South America). The priority of the programmes is the development of local healthcare and education systems, as well as the improvement of the quality of life and the reduction of poverty, including the provision of potable water, improved sanitation (in the countries where this issue is relevant), development of agriculture and access to energy resources. **HKEx KPI B8**

The total budget for social investment outside Russia in 2017 amounted to USD 1.3 million. **HKEx KPI B8.2**

In total, in 2017, UC RUSAL allocated USD 23.9 million for social investment and charitable projects in Russia and abroad. **HKEx KPI B8.2**

Results of 2017

In 2017, the activities planned in the framework of social investment programmes have been implemented and the following main results were achieved:

- Expanded geography of operation of the CSP – branch office was organised in Volgograd, working on three programmes: 'Helping is Easy', 'Formula of the Future' and 'RUSAL Territory'.
- The geography of implementation of the programmes was also extended in the Krasnoyarsk region. Included Nazarovo, Nazarovo district, Bogotol, Bogotol district, Tyukhtet, Sharypovш district
- A special automated platform for submitting project applications and their examination in the framework of grant competitions was developed and commissioned on the CSP website (*http://grants.fcsp.ru/*). On the basis of the website an electronic platform for online learning was opened in the 'School of Social Entrepreneurship', available to all users.

- Fund's participation in the international programme for the development of social entrepreneurship among the young Social Impact Award (SIA). The Centre for Innovation in Social Sphere of UC RUSAL has acted for the third time as a resource site for this international programme in the cities of operation. The efforts of the coordinators included informing about the competition, promotional activities, support for the participants who submitted applications for the competition. Seven events were held in total under the SIA programme, including the new format of the laboratory for the development of social projects Impact Lab on the methodology of the international programme for social entrepreneurs. In total 196 applications were received from 55 cities and towns of Russia, including 33 applications from the cities of operation of the Company. 12 projects of the participants of the SSE were included in TOP 50, and four projects were entered into the incubation programme (TOP 20). The winning project was the 'Kinesthetics Centre' (Novokuznetsk) of the School of Social Entrepreneurship in 2017.

- UC RUSAL opened the 'School of Urban Change' in the cities of Company's operation. This is a new social project, which aims at the formation and training of action teams that are interested in solving the current issues of the region and at creating communities of active citizens for the development of voluntary work and social entrepreneurship.

- The total number of beneficiaries of the social programmes of the Company in Russia amounted to 131 thousand people, more than 3.8 thousand volunteers were attracted, the programmes were supported by more than 1 million of partners.

- Obligations under agreements made with the constituent entities of the Russian Federation and the towns of operations have been met.

- UC RUSAL in the framework of the Year of Environment Protection conducted in the towns of its operation the 'Green League' marathon, which became a logical continuation of the 'Yenisey Day' programme.

- Additional resources were attracted in the form of grants of the President of the Russian Federation for the development of civil society under the programme: 'School of Urban Change' (for about RUB 3 million) and 'Yenisey Day' (for about RUB 2.6 million).

- ANO Centre for Innovation in Social Sphere has received a indefinite licence to conduct educational activities.

PARTICIPATION IN THE DEVELOPMENT OF THE TERRITORIES OF OPERATION

Agreements about social and economic cooperation are a tool to bring together the Company and local authorities to improve the quality of life in the regions and cities and the effectiveness of the production facilities of UC RUSAL located there.

The main areas of the partnership of UC RUSAL with the constituent entities of the Russian Federation and the cities, where its production facilities operate, include:

- support for general education schools, community centres, theatres, orphanages and further education institutions;
- provision of urban amenities;
- improvement of the quality of transport and social infrastructure;
- improvement of environmental situation **GRI 203-1**.

A related social partnership with the Company's territories of operation is a strategic development of single-industry city. Small cities that emerged around the production facilities built 60-80 years ago are now deprived of the future: obsolete production is closed and there are no other sources of income for local residents. According to the concept of the state programme of comprehensive development of single-industry cities, plans to transform such cities into economic and social priority development areas may be a solution. The 'stable single-industry city' strategy implies the retrofitting of the main operation, the development of social services, the reduction of taxes to attract investors, and the encouragement of migration of residents to work in the closest major cities.

The list of territories classified as the cities with the most difficult social and economic conditions included, among others, Krasnoturyinsk (Sverdlovsk region) and Nadvoitsy (Republic of Karelia).

The Company took the initiative to set up an industrial park on the premises of the unfinished in the 1970s second stage of the Bogoslovsk Aluminium Smelter in order to maintain jobs and improve the investment climate. New production, small and medium-sized businesses and non-industrial companies can also be developed within the park.

UC RUSAL is one of the founders of the management company of the Bogoslovsky industrial park in Krasnoturyinsk. In 2017 Bogoslovsky Cable Plant (a joint venture of UC RUSAL and ELKA-Cable group) has become a resident of the economic and social priority development area in Krasnoturyinsk. The production facility in Krasnoturyinsk will specialise in the production of cable products for the needs of the oil and gas sector and general industrial applications, of which there are currently no analogues in Russia. The production facility will employ about 90 local residents.

The town of Nadvoitsy (Republic of Karelia) also has the status of priority development area, where it is planned to create more than 400 new jobs by 2020. In 2017, the Company has begun to establish a data processing centre (DPC) on the premises of Nadvoitsy aluminium smelter. DPC will be focused on providing high-tech IT services, including special services for the analysis of 'big data' and computer-assisted learning. **GRI 203-1**

At the initiative of UC RUSAL, strategic plans for the development of small towns in partnership with town administrations are also being developed.

In 2017 studies of the social sphere were carried out and strategoes if the social policy were developed for Severouralsk and Sayanogorsk together with the Urban/Spacial Planning Institution Urbanica (Saint Petersburg). Strategies provide for a structured list of projects of various scale that are relevant for the cities, based on the assessment of the significance of social problems. The concept of landscaping of the City Central Park was developed in Bratsk.

The implementation of the Agreement made in 2007 about the resettlement of inhabitants of the Chekanovsky residential district of the city of Bratsk located in the environmental buffer zone of the Bratsk Aluminium Smelter continued in 2017. Four block sections of a 9-storey building and two block sections of a 5-storey building were built. The total area of the housing area built amounted to 23,891 sq. m. or 408 apartments.

Work is underway to demolish the houses and reclaim the land: in total from 2014 to March 26, 2018, 452 houses were demolished. The project provided for the relocation of 471 families, of which 378 families were relocated, including 46 families during 2017. From the rest, 28 families have the right to resettle. In 2018 it is planned to complete the relocation. Relocation into advanced apartment buildings in residential neighborhoods of the city of Bratsk has a positive effect on the incomes of the residents, since transport and social infrastructure becomes more accessible, less time is spent on the trip to work **GRI MM9.**

MANAGEMENT OF SOCIAL PROGRAMMES IN RUSSIA

In line with the CSP development strategy, further steps have been taken to improve the efficiency of the management of the social programmes and organisational development of the management structures. In 2017, internal controls and workflow procedures of the CSP were improved. Transparent and controllable mechanisms for financial and non-financial motivation of employees. Staff development is being addressed: the programme of training courses, participation of the employees in forum and conferences is being formed.

The geography of programme implementation is extended. The number of partners is increased by 13%, compared to 2016. To determine the peculiarities and interests of the towns, the pool of partners and potential applicants, as well as for the development of the branches of the Centre, passports were developed for all towns with the branches of CSP.

Measures have been taken to improve the quality of projects submitted for grants and implemented by grantees. New scheme of conclusion of contracts with the winners of grant competitions was implemented. All project budgets have now been verified by the accounting department of the central office of the Fund. This allowed avoiding a large number of errors in the formation of budgets.

The employees of the production facilities are regularly informed about the social programmes and major events and participate in the opening of infrastructure facilities. The representatives of CSP speak during Common Information Days and at meetings of the heads of production facilities, providing information about the outcome of activities and opportunities for participation in CSP programmes. As a result, the employees of the Company become active participants, initiators and organisers of events in the framework of the social programmes, projects and actions of the regional offices of the National Council for Corporate Volunteering.

Description of social programmes implemented in Russia in 2017

Indicator	RUSAL Territory	Helping is Easy	Social Entrepreneurship
Relevance: Number of applications received from residents/organisations/Number of participants at the Schools of Social Entrepreneurship, persons.	421	521	1062
Quality: Number of grants awarded or interest-free loans issued	111	142	– *
Coverage: Number of settlements, in which the financed projects are being implemented	20	16	7
Sustainability: Share of co-financing from partners, % of the total programme budget	61	53	11

* *The grant competition under the programme was not held in 2017.*

IMPLEMENTATION OF SOCIAL PROGRAMMES IN THE RUSSIAN FEDERATION

RUSAL Territory

The purpose of the programme is to improve the quality of life in the territories of the Company's operation through the development of the urban environment, creation of new public and cultural spaces, retrofitting of social infrastructure facilities and organisation of cultural, developmental and sporting events. A feature of the programme is the establishment of long-term partnerships between authorities, business, non-profit organisations, mass media and local residents.

Local community projects receive grant support in three categories:

- The city of the future – original solutions for urban improvement and urban development, reconstruction, repair and equipment of social infrastructure facilities;
- The city of ideas – improvement of local public spaces (building surrounding grounds, school districts, squares and parks);
- The living city – organisation of urban cultural events (festivals, art and museum exhibitions, musical concerts, theatrical productions, etc.), as well as the replication of effective social technologies in the area of education, sports and youth policy.

Given the nature of the programme, a diversified forms and tools of stakeholder relations are being used. The mechanisms for interaction in the implementation of the programme include:

- annual Forum of Ideas – a conference, in which the representatives of all stakeholder groups participate in order to identify priority projects for the development of the urban environment;
- Schools of urban changes – training and negotiating venues, where projects that are found to be the most relevant at the Forum of Ideas are developed or finalised;
- crowdfunding (*Planeta.ru* platform) – co-funding of the projects presented at the competition by any stakeholder;
- online voting of the residents of the territories for the projects presented at the competition;
- clubs of grantees.

The best projects implemented by grantees are published on the website of CSP *(http://www.fcsp.ru/keysy-proektov/)* for proliferation and replication of progressive practices and ideas.

In 2017 under the RUSAL Territory programme 55 infrastructure facilities were completed, including in educational institutions, institutions of culture and youth policy, social protection institutions, nonprofit organisations, etc. 80,972 persons were the direct beneficiaries of the grant projects, 1211 activities were performed with the participation of 525 partners.

From December 1, 2016 to April 17, 2017 in nine regions and 25 residential areas of the Russian Federation a competition of projects was held. For the first time all of the tendering procedures, from application to independent expert review, were performed using an electronic platform, which significantly increased the possibility of participation in the competition and the effectiveness of application management. Online voting of the residents about the projects submitted to the competition was also organised on the new platform. The expert council, including 78 independent experts and 25 representatives of UC RUSAL, carried out the remote expert review of the applications. The final decision about project support was taken by the Bidding Committee including 14 representatives of UC RUSAL and independent experts from 6 areas. When considering applications, the Committee took into account the ranking of the participants, which is largely formed by the results of online voting. Through the use of the new electronic platform, almost 60 thousand residents could participate in the voting procedure, which is by 2.6 times more than in the previous year.

Public protection has also become an important stage of expert examination of infrastructure projects, it allowed to attract the attention of mass media to the competition, to see and appreciate the teams personally, to make the expert examination more transparent, the authors of the projects to get feedback.

The results of programme implementation in the regions in 2017

- Urban development continues to be one of the priorities of the programme. In Krasnoturyinsk, in the framework of the project of reconstruction of the Central Park the adjacent embankment was developed. In Sayanogorsk continued the development of the Park of Active Recreation and the Mainsky square. In Krasnoyarsk on the premises of school No 152 the territory of family leisure and rest 'Yastynka' was created, infrastructure for leisure and development, educational activities for the youth was completed in the Park on Kamenka.

- Space for the development of local communities (co-working centres, etc.) in Novokuznetsk, Kamensk-Uralsky and Krasnoyarsk was equipped.

- Several projects were implemented in the area of innovative, scientific and technical creativity of children and youth in secondary schools: the project 'Children's Workplace Learning Centre 'City of Masters' in Novokuznetsk, a specialised competence centre 'Design of alloys and materials' in Krasnoyarsk. Technical centre NeoLab to practice technical creativity and youth information centre MediaHub for teaching programming and mobile app development were created in Krasnoturyinsk, an advanced club of technical creativity was also opened here, and in Severouralsk the studio of technical work and creativity was opened.

- In order to teach children to behave safely on the roads and in life in Volgograd a training area was equipped for practical lessons in the child driving school 'Garage', the construction of the children's automobile city was completed in the Centre of children creativity of Severouralsk. The study of social orientation for children with special needs was equipped at the boarding school in Tayozhny village of Boguchany district of Krasnoyarsk Territory.

- Significant sports facilities were created: the 'Snow Park' in Bratsk, the High Rope Courses 'Vertical' and 'Bike Park' for figure driving and bike-trial in Volgograd, sports court Topolyok for year-round physical exercise and sports in Krasnoturyinsk, school stadium in Kamensk-Uralsky, three outdoor sports grounds for the residents of Shelekhov. Repair and equipping was carried out at the ski base of the Children and Youth Sports School in Cheremukhovo township of Severouralsk urban district,

- Rehabilitation centre was equipped in Sayanogorsk interdistrict hospital; it can be used now for complex treatment of adults and children with disfunction of the central and peripheral nervous system and musculoskeletal apparatus.

- In 2017, the staff of CSP successfully implemented their own projects, initiating the inclusion of citizens in the development of ideas and immediate improvement: 'Big construction' (Novokuznetsk) and 'Workshops on Chulyma' (Achinsk).

- For the promotion and popularisation of the experience of successful implementation of projects in the category 'Leaders of urban changes', 19 case studies about projects implemented in the framework of the RUSAL Territory programme were published on the CSP website.

'School of Urban Change' programme

In early 2017, UC RUSAL initiated the launch of a new social project 'School of Urban Change'. This project aims at the enhancement of the project culture of the participants of the RUSAL Territory programme, at the formation and training of action teams that are interested in solving the current social issues of the region and at creating communities of active citizens for the development of voluntary work and social entrepreneurship.

'School of Urban Change' appeared in the cities of operation of UC RUSAL: Abakan, Achinsk, Bratsk, Volgograd, Kamensk-Uralsky, Krasnoturyinsk, Krasnoyarsk, Novokuznetsk, Sayanogorsk, Severouralsk, Tayshet and Shelekhov.

The School brings together active residents and professionals in the field of social design, corporate volunteering, entrepreneurship and territorial development. In 2017, the 70 events of the 'School of Urban Change' included 2635 people from 11 towns. The School engaged federal-level examiners in urban planning, design and strategic development; it has aroused interest among the representatives of authorities, departments, agencies, directors of non-profit organisations, grantees, entrepreneurs, and mass media.

Lessons were dedicated to exploratory design and social planning technologies, the study of the best projects of territorial development, as well as practical training in preparation of grant applications for the RUSAL Territory programme.

The training programme also included foresight sessions and brainstorming on the topic of current trends in the development of towns. The meetings in the framework of the 'School of Urban Change' generated new ideas, projects and solutions for the development of urban spaces. In addition, it initiated the formation of communities, administrations and professionals who together generate a vision for the development of their territories.

Structure of funded and implemented projects in 2017

	number of projects
Education	13
Culture	4
Sports	16
Infrastructure for people with disabilities	5
Urban spaces	16
Health care	1

Programme development plan for 2018

- Revision of electronic grant platform as a tool for monitoring project implementation and feedback from grantees. Implementation and configuration of a new system of filing, expert examination and implementation of projects based on the personal accounts of the applicants, examiners and managers of the programme;
- Contribution to the development of towns through the development of a social policy strategy in Belogorsk, Novokuznetsk, Achinsk, Taishet, Kandalaksha, Tayozhny and Nadvoitsy, support for the implementation of the urban development strategy in Achinsk and strategies of social policy in the cities of Severouralsk and Sayanogorsk, including using the grant of the President of the Russian Federation for the development of civil society provided by the Presidential Grant Fund.
- Improving the efficiency and sustainability of the projects proposed for implementation and on-going projects through accelerators of social projects of the 'School of Urban Change' programmes for 60 projects-winners of the competitions in 2017 and 2018, and 20 social entrepreneurial projects;
- Development of local communities of the leaders of urban changes (volunteers, social entrepreneurs, action teams) through the establishment of clubs of grantees and grant applicants, communication and education platforms (School of Fundraising together with the Association of Fundraisers: Novokuznetsk (June), Volgograd (September), Krasnoyarsk (September), discussion platform Urban Talks in partnership with RosAtom Information Centre in Krasnoyarsk (April-September), City Forum 'Communities change cities' in Severouralsk, etc.), mentor schools, introduction of electronic platforms for joint work of project teams on project development in at least 10 cities of operation of the Company, in which more than 1,500 persons participated;
- Replication of advanced technologies of socially meaningful activities in working with grantees and grant applicants, socially active residents, publication of a methodological guide for the development of social entrepreneurial projects, conducting classroom workshops, courses of professional development in social planning, writing proposals for grant competitions, grantmaking and other topics, using tried and tested practices and expertise of the employees of CSP;
- Development of the online component of the 'School of Urban Change': development and launch of new courses in social planning, corporate volunteering, extension of the course on social entrepreneurship with up to 1000 participants and 100 people trained, carrying out a series of webinars on topics aimed at improving the effectiveness and sustainability of social projects (including volunteer and entrepreneur) with the involvement of examiners on a pro bono basis, including the use of the grant of the President of the Russian Federation for the development of civil society provided by the Presidential Grant Fund.
- Development of activities for partner city events involving citizens in the process of urban development, improvement of the city on their own, shaping the values of good neighbourliness and active citizenship 'Big construction', 'Workshops on Chulyma', 'Do it yourself' city' in Novokuznetsk, Achinsk, Kamensk-Uralsky involving more than 500 inhabitants.

- Replication and promotion of successful social practices and project implementation by holding the Meeting of the leaders of urban change in Novokuznetsk with the participation of 300 persons from 3 regions, continued work on the creation of videocases about successful projects, including using the grant of the President of the Russian Federation for the development of civil society provided by the Presidential Grant Fund.

RUSAL Festival project

RUSAL Festival, a large-scale social and cultural project, which brings together numerous thematic events in the towns of operation of the Company, is carried out since 2015.

It is aimed at forming the interest of the residents to the culture, art, science and invention, healthy lifestyle. Tickets to all events of the RUSAL Festival project are distributed free of charge to cultural, social and educational institutions, as well as among the employees of the production facilities of the Company. Part of the tickets raffled in mass media and social networks.

In 2017, the annual RUSAL Festival in #Theatre, #Cinema, #Science, #Velo was held in 17 towns of Russia and Armenia. 62 events were organised for the residents of the towns of operation of the Company.

In the Reporting Period night cycling in the framework of the project 'RUSAL Festival #Velo' was organised for the third time in Krasnoyarsk, Irkutsk and Yerevan by UC RUSAL. Thematic biking excursions were carried out on special cultural routes developed by well-known art critics, historians, architects, environmentalists and local historians of the International Velonotte bureau. To participate in the biking excursion you only had to register for the event in advance.

In the summer of 2017 RUSAL Festival #Theatre events were held in eight cities of Russia in which metropolitan theatrical productions involving young actors were played. Residents of the regions of operation of the Company saw 14 productions of the Moscow Art Theatre School and the IyulAnsambl on-stage performance group. The productions were visited by more than 7 thousand spectators. RUSAL Festival #Theatre is part of a large joint programme of Moscow Art Theatre School and Oleg Deripaska Foundation 'Volnoe Delo', which is already implemented for more than 10 years.

In the fall of 2017 at Company's initiative seven towns hosted the festival of Russian cinema. In the regions of operation of the Company this festival has a special social significance, because many settlements are located at a large distance from the regional centres and the majority of them do not have cinemas. On the first day of the festival the residents of seven small towns and villages were presented the novelties of Russian cinema, including the programme of cartoons for children, and on the second day the movie versions of the performances that won the Golden Mask award were presented. Traditionally, the festival is held in the format of a family holiday, in which people of all ages can participate. In addition to the movies, an entertainment programme was prepared for the guests. Number of participants in 2017 amounted to 13.5 thousand.

In the winter of 2017 RUSAL Festival #Science was launched, including the first time outside of Russia in Yerevan. For four days in each of the eight participating towns lectures were given by scientists, scientific exhibitions, shows of films of Nauka TV channel, excursions of pupils to UC RUSAL production facilities were held, children research quests and mind games for seniors were organised. The events were aimed at promoting science and innovation among pupils and students, increasing the interest of senior students in the mastery of technical skills that are in demand at UC RUSAL production facilities. A separate part of RUSAL Festival #Science was dedicated to the 'Winged Metal' programme. The guests of the event received information about the properties of metals, including production from aluminium and aluminium alloys, participated in science shows and in master classes. All events had free entrance. Number of participants in 2017: more than 30 thousand persons.

UC RUSAL actively supports important cultural events aimed at supporting and promoting the best feats both in Russian regions and abroad. In 2017 UC RUSAL became for the first time the general partner of XIII International competition for ballet artists and choreographers, which is held every four years in Moscow on the scenes of the State Academic Bolshoi Theatre. This is one of the oldest and most prestigious competitions in the field of ballet in the world.

Helping is Easy

UC RUSAL considers volunteering to be an important tool for building a firm relationship of the Company with local communities. Therefore, the promotion of this movement is one of the priorities of the Company's social investment programmes.

The objective of the 'Helping is Easy' programme is to promote corporate and urban volunteering, to identify and support best practices aimed at involving active citizens in volunteer activities in the Company's regions of operation. The mechanisms for programme implementation include:

- 'Helping is Easy' portal *(http://pomogat-prosto.ru)*, an open site that brings together people who are willing to provide assistance as volunteers and for the non-profit organisations that need it;
- charitable and fund-raising events initiated by the CSP in the cities of operation;
- annual New Year charity marathon, 'Believe in miracle, create a miracle', a series of charitable events for volunteers with socially vulnerable audience, as well as a federal fundraiser for New Year gifts for children from socially vulnerable families and orphanages;
- School of Volunteers – training courses, master classes and workshops on volunteering;
- grants competition 'Green Wave' with engagement of active citizens in the greening and landscaping of the towns;
- grants competition of volunteer projects 'Helping is Easy', to identify and support social initiatives of citizens, companies and initiative teams;
- participation in the National Council for Corporate Volunteering *(http://www.nccv.ru)*, a public venue that brings together organisations and companies that have been set up to proliferate the best practices of corporate volunteering in Russia, promote volunteering ideas, develop standards and methodical tools for volunteer programmes.

The results of programme implementation in the regions in 2017

In 2017, the development of volunteering continued. The priority of the programme was to build up the connection and forge long-term relationships with partner companies in the cities of operation of UC RUSAL Centre for Social Programmes. The important tasks also included the development of the system of motivation and systematisation of the activity of corporate volunteers of UC RUSAL, the description of the best practices of CSP branches in terms of interaction of the managers of programmes with grantees and partners.

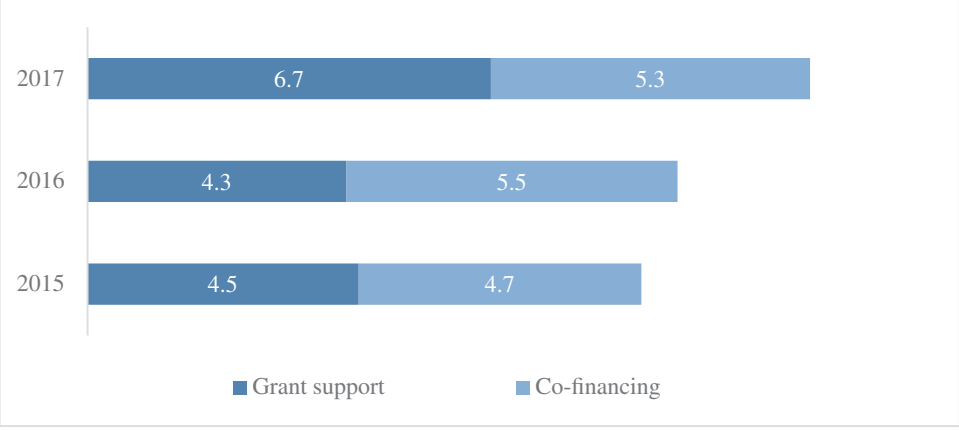
The work was carried out on the formation of communities in Instagram and messengers that allow attracting potential participants, discuss organisational issues and identify relevant topics for the volunteers.

In 2017, the New Year marathon was held for the seventh time. It brought together more than 1,500 volunteers, most of whom were represented by the employees of partner companies, from 19 cities and towns. On their own they have organised over 500 different socially significant activities and helped 8,700 people in need and 146 organisations. The most massive events of the New Year marathon were charitable fairs aimed at raising funds for treatment and rehabilitation of severely ill children, supporting ward social institutions and charitable foundations from all over the country. In total during the campaign RUB 875 thousand were collected as donations. For the first time VKontakte social network was chosen as a channel of communication with the participants of the New Year marathon.

To engage active citizens in the greening and landscaping of the city in the framework of the ecological marathon UC RUSAL has developed and conducted a **grants competition 'Green Wave'** (see section 'Events of the 'Green Wave' Ecological Marathon).

In the framework of the grants **competition 'Helping is Easy'** 521 projects were discussed, the funding was provided for 142 volunteer initiatives and projects aimed at working with socially vulnerable groups, the development of pro bono volunteering, the formation of voluntary communities, organising and conducting educational activities for them. About 43% of applicants participated in the competition for the first time, about a third of the projects were presented by the action teams of the residents.

Funding of projects in the framework of the competition, RUB million



Indicators of the Helping is Easy programme

Year	2011	2012	2013	2014	2015	2016	2017
Number of volunteers	3,563	5,974	10,242	9,018	10,472	6,304	3,800
Number of events	1,484	1,721	1,324	1,625	1,497	2865	840
Number of direct beneficiaries	7515	13,333	29,556	40,807	41,669	72,015	31,000
Number of partner organisations	595	540	761	570	563	1072	567

In 2017 the youth councils of the production facilities of the Company took active part in grants competitions of 'Helping is Easy' and 'Green Wave' volunteer projects. 16 projects of young volunteers aimed at guidance of children in difficult life situations, as well as creative work with children in supported social institutions, were sponsored.

UC RUSAL corporate volunteers were also actively involved in all large-scale urban eventss initiated by CSP, including Yenisey Day in Krasnoyarsk, 'Let's Do It' in Novokuznetsk, 'Fun Saturday' in Volgograd, 'The Energy of Our Hearts' in Achinsk.

'National Council for Corporate Volunteering'

The community group 'National Council for Corporate Volunteering' (*http://www.nccv.ru*) was established at the initiative of UC RUSAL and a number of partners. In the Reporting Period the Council included already more than 30 companies and organisations.

In 2017, the branches of the National Council for Corporate Volunteering continued to work in Krasnoyarsk, Bratsk and Novokuznetsk. In other towns the work with partners was structured in the framework of major city events, often initiated by the Centre for Social Programmes of UC RUSAL. During the Reporting Period 567 partners participated in the activity of NCCV and in these urban events. 840 events were held with their participation, covering about 31,000 direct beneficiaries. For the organisation of activities under the programme volunteer and partner resources were engaged, which increased the programme budget by more than RUB 2,5 million.

In November of 2017, UC RUSAL acted as the official partner of the 6th Corporate Volunteering: Business and Society international forum. The forum brought together more than 500 participants from Europe, Asia, America and many regions of Russia. The results of the first large-scale study 'PRO BONO: Russian practice and the vector of development' were presented, and the winners of Russian contest of corporate volunteering projects 'Champions of good deeds' were decorated.

Through the work of the National Council in Moscow, the participating companies at the initiative of UC RUSAL acted as examiners in the area of corporate volunteering at the conference of the Vedomosti newspaper – 'Charity in Russia', prepared publications and expert assessment of the development of volunteering in Russia for the Agency for Strategic Initiatives, participated together with HR-TV.ru in the preparation of a series of videos about the development of Corporate Volunteering.

In the first half of 2017, more than 40 employees of UC RUSAL were trained to work as volunteers at 2018 FIFA World Cup in Yekaterinburg. Upon the completion of the entire education, the group of volunteers included 21 persons.

Environmental activities with the participation of corporate volunteers and local communities

The activists of youth organisations of the production facilities of UC RUSAL participate time after time in local campaigns and environmental care programmes for the greening of the urban environment, cleaning of water protection zones at the initiatives of municipal administrations and local state environmental protection bodies.

The Company is working to promote environmental education, awareness and formation of ecological consciousness among the younger generation in cooperation with universities and general education institutions.

Yenisey Day ecological marathon

In 2017 Yenisey Day ecological marathon was held for the first time in partnership with the Clean Games federal project, when the teams playfully compete in garbage collection. Environmental quests at the opening and closing of the marathon in Krasnoyarsk gathered more than 250 participants from 11 companies of the city at the start, and more than 700 participants from among corporate and civic volunteers and active residents at the closing. During two mass events more than six tonnes of garbage were collected.

The main event of the Yenisey Day was the organisation of environmental points on Yaryginskaya embankment – one of the most popular recreation areas of the residents. Installation of garbage cans and garbage removal was agreed, plan-scenario was developed to attract the attention of the population to the action with the Administration of Green Construction of Krasnoyarsk. In addition to collecting garbage, the volunteers carried out various interactive activities with the participants of the platform. More than 60 volunteers participated in the work of environmental points, including the representatives of the companies-members of the National Council for Corporate Volunteering in Krasnoyarsk (UC RUSAL, MTS, Sberbank, KraMZ) and urban and student teams. During the work of environmental points the residents of the city had collected about 7 tonnes of garbage.

The National Council for Corporate Volunteering participated in the organisation of the Yenisey Day site at the Green festival. The site included locations with master classes a charity fundraising was organised to support the Krasnoyarsk project 'Polka-dotted house' (performances for oncology children in hospitals), photo quest was conducted and attended by over 100 people. The mail of Yenisey Day received more than 300 letters in the form of cards with the symbols of the ecological marathon. In two days the site was visited by about a thousand people, its work was supported by more than 20 volunteers.

The events of the marathon were also held in Sayanogorsk. A photo exhibition, contest 'Gift to Yenisey', 'Aluminium regatta on Yenisey', a family festival dedicated to the fifth anniversary of the Yenisey Day in Khakassia and a family contest 'Yenisey pictures' were organised here.

In total, the marathon Yenisey Day was attended by about 4.5 thousand volunteers from 14 cities. In total 3398 bags of trash were removed and 2317 trees were planted. At the end of the 2017, the Yenisey Day project has received funding of RUB 2 million in the framework of the Presidential Grant.

Events of the Green Wave ecological marathon

In the spring of 2017 at the initiative of UC RUSAL Green Wave ecological marathon dedicated to the Year of Ecology in Russia started in the towns of operation of UC RUSAL. Two grants contests for volunteer initiatives in greening, as well as the massive volunteer actions for the cleaning of parks and river banks, planting of trees and shrubs, were held.

Everyone interested, Company's employees, local residents and community organisations, could send the application to the organisation committee of the Green Wave, with a plan for the landscaping of a particular area. On the first stage (May-June) trees were planted, on the second stage (September-October) river banks were cleaned.

In the framework of grant contests, UC RUSAL has financed 78 projects in 14 cities amounting to RUB 762 thousand.

In the framework of the ecological marathon ten projects of Krasnoyarsk residents were implemented. In June 2017 in the territory of the Severny district a new square was created, the creation of which was attended by the employees of the Company and the residents of neighboring houses. 1,500 of trees and shrubs were planted.

In Sayanogorsk 100 apple trees were planted, grants contest was held for the best projects of gardening and landscaping, the 'Japanese garden' was laid in the courtyard of the school of the Cheryomushki village. At the initiative of the Irkutsk Aluminium Smelter in the framework of Green Wave in July and September trees (110) were planted and the premises around the Lazurny pool, where trees were planted earlier, was cleaned up (trimming, cleaning from grass). The banks of the pits and the Irkut river were cleaned, carp fry was released.

Bratsk Aluminium Smelter

- In total 2,640 trees and shrubs and 148,500 flowers were planted worth more than RUB 5 million. Trees were planted on the premises of the smelter and in the kindergarten, apple orchard was planted on the Metallurg playground and flowers in Sodruzhestvo city park.
- The ecological project 'Water Trail' became the winner of the Project Production Facility in the nomination 'The Choice of UC RUSAL'. The volunteers together with the youth council of the Bratsk Aluminium Smelter carried out a campaign for the cleaning of the debris from the recreation areas of 'Krylaty' and 'Solnechny' resorts. The event was attended by 125 persons.

Krasnoyarsk Aluminium Smelter

- In the first ten days of May an ecological event 'Lilac Spring' was organised by the Krasnoyarsk Aluminium Smelter with the support of Komsomolskaya Pravda Publishing House. Metal-makers together with the residents planted more than 200 lilac trees in kindergartens, schools, hospitals, parks and squares, the courtyards of the houses of the Soviet district. Veterans together with young employees planted the alley of 50 lilac bushes in front of worker's club of the smelter.

Sayanogorsk Aluminium Smelter

- In early August, with the financial support of USD RUSAL the ecological press tour was organised for the journalists of the Republic of Khakassia on the Yenisey river from Sayano-Shushenskaya HPP to the Shugur post. It was dedicated to the tenth anniversary of programme of biodiversity monitoring in specially protected natural territories of the Altai-Sayan ecoregion.

Irkutsk Aluminium Smelter

- In the framework of the action plan of the Year of Ecology a presentation on 'Greenhouse gases' was prepared, two demonstration lessons were held for the pupils of the fifth grade and the 11th grade of secondary school and 8th grade of the lyceum.

Novokuznetsk Aluminium Smelter

- In the framework of the Year of Ecology 8 campaigns were carried out on the premises of the smelter and in various parts of Novokuznetsk, which were attended by about 600 people. 243 trees and shrubs were planted, including in the framework of the Green Wave campaign, and 5 tonnes of waste were collected.

Total for 2017 the Green Wave project was attended by about 4.5 thousand volunteers from 16 towns. They collected and removed a total of 3398 bags of garbage and planted more than 7 thousand trees. In addition, environmental workshops, educational lectures and competitions were held during the marathon.

Programme development plan for 2018

- Attraction of a new audience of active citizens to participate in the Green Wave project by working with homeowners associations, management companies and municipal administrations.
- Involvement of new volunteer groups in the Green Wave project and increasing the number of venues of volunteer campaigns of tree planting in the towns of operation;
- Development and implementation of a volunteering projects monitoring system through the improvement of the online platform;
- Development of teaching materials for interaction with the grantees, using the experience of the Club of Grantees operating in Novokuznetsk;
- Working with student volunteer organisations, engaging students in the participation in the Helping is Easy programme and the activities of the Fund.
- Improvement of the forms and tools of promotion of the project of New Year marathon 'Believe in miracle, create a miracle'.
- Implementation of the Yenisey Day Ecological Marathon as an interregional project to expand the geography and number of participants to 2500 people in Krasnoyarsk, Achinsk and Sayanogorsk, including with the support of the grant of the President of Russian Federation for the development of civil society provided by the Presidential Grant Fund.

Social Entrepreneurship Development

The objective of the programme is to create conditions for the work of social entrepreneurs, organise resource centres based on CISS, teach about the technologies for launching, promote and develop business projects in the social sphere.

The programme enhances the social and business activity of the residents of the territories of operation, the access of socially vulnerable categories of population to social services, the employment of socially vulnerable groups (people with disabilities, women with small children, etc.). The programme consists of several components, including:

- School of Social Entrepreneurship (SSE), in which those who wish to become social entrepreneurs can examine the characteristics of this activity, the basis of business planning and the management of a production facility;
- mentoring institute – assistance from the mentors (skilled professionals and entrepreneurs) to newbie entrepreneurs;
- interest-free loans competition.

The mechanisms for interaction with stakeholders in the implementation of the programme include:

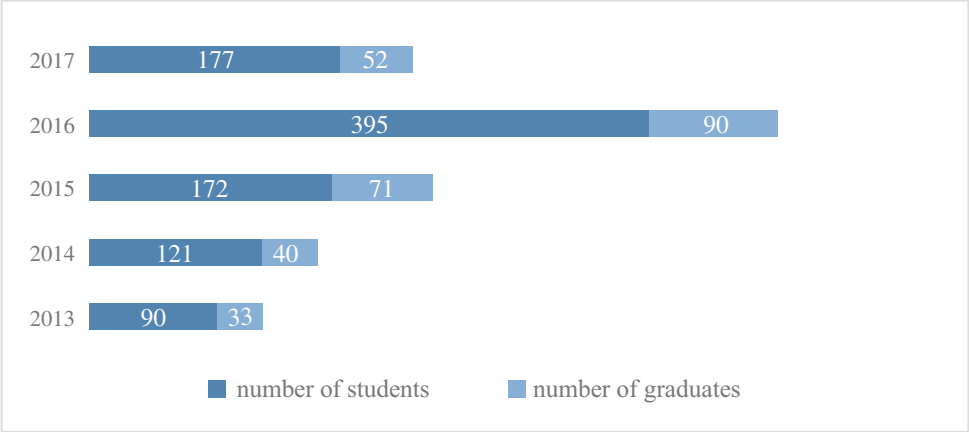
- club of CISS residents – a meeting of programme participants with specialists in different areas for consultation, horizontal relations and communication;
- partnership programmes – the involvement of the Company in social business development initiatives. An example of this partnership is the support by UC RUSAL of International Social Impact Award competition *(http://socialimpactaward.ru)*, since 2015, aimed at popularising this area among young people.

Main programme results in 2017

UC RUSAL is engaged in the development of full-time training programmes for social entrepreneurs in six towns of Siberia and the Urals since 2013. The resident format of the School of Social Entrepreneurship includes four training sessions with a duration of 144 hours.

During its operation, the school trained 955 entrepreneurs; they have developed 106 effective socially oriented business projects. The Company invested more than RUB 20 million in the programme. In 2017, 177 students were trained, 52 graduates were from Krasnoyarsk, Novokuznetsk, Kamensk-Uralsky, Krasnoturyinsk. As a result of the training, a base of active entrepreneurs that implements social and socially responsible business projects was created. The total number of active alumni projects in 2017 made up 42 projects in six cities.

The number of residents of the School of Social Entrepreneurship



In April 2017, UC RUSAL has launched a new online school for social entrepreneurs *(http://www.fcsp.ru/edu)*. The Internet platform organised by the Centre of Innovation in the Social Sphere of UC RUSAL allows obtaining a high-quality business education and develop independently a project to address social issues. Young entrepreneurs, businessmen with experience in the business sphere and representatives of non-profit organisations can all participate in this project. They need to register on the site to do this. The distant training course consists of 12 blocks, each of which includes a video lecture, notes, test, form of the business plan element, sharable content and a platform for communication with other programme participants. Also a series of additional webinars was planned.

The best students are offered the opportunity to receive individual advice from the mentors of the resident School of Social Entrepreneurship of UC RUSAL. The result of training is a ready business plan for a project in the field of social entrepreneurship.

The online school aims to spread the best experience of the training programme for social entrepreneurs in the new territories and to new participants who had not previously had the opportunity to get full business training.

By engaging the participants of the online course from other countries and Russian cities, the coverage area of the participants increased to 113 towns in eight countries. Out of 527 persons engaged to undergo the programme 30% completed the training.

Mentors mainly from among the graduates of the previous years of training were engaged to work on the projects of the participants of the SSE. Priority areas of project development included:

- Culture and entertainment (mass media, art, museums, sports, domestic tourism) – 30%.
- Social services (children, youth, seniors and people with disabilities) – 27%.
- Education (child and adult) – 16%.

Programme partners – companies of the IT sector providing educational and advisory services - provide discounts of 20 to 30% on their products and services for school participants.

According to the survey of the participants, the majority of them said that without the training at the School of Social Entrepreneurship their social projects would be less structured and elaborated.

The club of the resident graduates of the School of Social Entrepreneurship operates on the principle of thematic meetings for capacity building for the development of participants' projects. In the framework of the development of the club the following events of the new format were held in 2017:

- Storytelling 'Stories from the life of the city K.' (Kamensk-Uralsky and Krasnoturyinsk).
- Networking platform 'Networks help!' (Kamensk-Uralsky).
- Workshop for the development of social projects 'Loveable Town' (Kamensk-Uralsky).
- Thematic workshops also hosted by the graduates of the SSE (Novokuznetsk, Krasnoyarsk).

'Go Skiing!' project

Since 2016 UC RUSAL together with En+ Group and the Cross Country Ski Federation of Russia initiated the creation of and supports the social project 'Go Skiing!' aimed at the development and popularisation of mass skiing. The project provides for training seminars for coaches in order to improve professional qualifications of specialists in cross-country skiing, equipment with skies and sports equipment and equipment of teams in cross-country skiing, holding of mass ski holidays aimed at promoting a healthy lifestyle and cross-country skiing. In addition, the participating regions hold the championship 'Go Skiing!' for boys and girls of junior and middle ages. The first selection stage is carried out at the municipal level, the second stage is carried out at the regional level. The championship ends with an open final competition.

Project implementation results

	2016-2017 season	2017-2018 season
Number of regions participating in the programme	3	8
Number of coaches that improved their qualifications	144	256
Funds for the equipment of regional teams, roubles	10,234,939	5,775,000
Number of towns, in which holidays were held	10	12
Number of participants in ski and sports holidays	13,000	14,000
Number of participants in the qualifying stages of the championship	540	502

For two years the project has collected unique materials about cross-country skiing, which are published in social networks. Extracts from reports and interviews of the project used in federal and regional media has collected more than 1 million views. The 'Go Skiing!' project has implemented the unprecedented in Russia video reviews of the largest ski resorts in the country with the participation of famous athletes. More than 15 master classes for athletes of different levels and two detailed video tutorials on the running technique with full exercises for amateurs and professional athletes were recorded. The platform for online training of coaches in cross-country skiing and biathlon was prepared and launched. Two training course for trainers in cross-country skiing and biathlon with a total duration of 216 hours were developed and recorded together with leading scientific experts.

SOCIAL INVESTMENTS ABROAD

Throughout the history of operation of UC RUSAL in foreign countries, the Company invested in community development, helped to improve the quality of healthcare and education systems as well as social services. Through social investment, the Company returns to society some of the revenues it receives from production. Some of the projects implemented in 2016 in the four countries are presented below. **GRI 203-2**

Armenia

In 2017, large-scale social and cultural project of the Company 'RUSAL FESTIVAL #Science' was first held abroad – in Armenia. The event was supported by ARMENAL foil rolling production facility, a member of the Company. In the framework of the scientific festival the interactive scientific exhibition, the co-organiser of which was the Yerevan State University, was held in Yerevan. Along with the exhibition, public lectures of scientists and documentary films on science excursions for schoolchildren to ARMENAL, mind game for high school students 'Cup of Engineers' and scientific game 'Space Agency' were organised. The events of the festival were attended by 5 thousand residents of Yerevan and regions of Armenia.

With the support of the production facility in the framework of 'Green Wave' ecological marathon debris were cleaned from the banks of the Hrazdan river under campaigns, which also included the representatives of the administration of Arabkir community, students of Mehrabyan Medical Institute and Medical College and College of Informatics. The campaign was attended by 100 people, 3 tonnes of debris were removed.

Republican special complex 'Vardashen' received 15 computers for the children from needy and dysfunctional families.

Jamaica

In Jamaica, UC RUSAL (through WINDALCO) funds a large number of projects aimed at developing the potential of local people, especially young people, and improving their living conditions.

Project/area	Content of the projects
Youth scholarships and grants	Local youth is given the opportunity to receive grants and scholarships to study at local and foreign universities. In 2017, scholarships were awarded to five senior students of the local University of Technology. Support was provided to complete the research diploma project and to pay for the last year of university studies. Another 35 students received grants and scholarships to study at various higher educational institutions of the island. The selection of scholarship holders is based on their academic performance, financial situation, participation in extra-curricular activities, as well as knowledge of the bauxite industry. 28 students who were studying at the Siberian Federal University and the People's Friendship University of Russia in Russia continued to receive support.

Project/area	Content of the projects
Labour Day at schools	To celebrate Labour Day, which is celebrated each May, the volunteers of the Company participated in the painting of the Primary School of Jericho located near the production facility, and also built the guard post in the Secondary School of Kendall (Manchester) and performed repairs at the Old Harbour School located near Port Esquivel. Employees also helped out in the improvement in other schools and community centres.
Back to School project	The Back to School project targets youths of school age from communities near the production facilities of the Company. In anticipation of the new academic year pupils and students living in communities located in the vicinity of the production facility (Ewarton) underwent medical examinations from general practitioners and dentists. They also received school supplies and gift vouchers for the purchase of teaching aids. Similar actions were carried out in Port Esquivel. Children were also provided with educational materials on safety in railway transport developed in the framework of the information campaign.
Support for schools in local communities	The Company also makes donations to the initiatives of local schools and institutions for children of early age. Funding is being allocated for the improvement of school meals and the provision of potable water. In particular, the water reservoirs were purchased for two rural schools to ensure a supply of water in case of drought or disconnection of main water supply. Donations were made on the occasion of world water day
Health care	Together with local branches of the Lions club, the Company assisted in painting one of the departments of the Linsted hospital and donated funds for the construction of the pathological-anatomical laboratory in Mandeville. Assistance was also provided to the Bethlehem orphanage, the special care department of the Spanish Town hospital, the neonatal department of the Mandeville hospital and Linsted hospital. WINDALCO also continued to support the Civil group against violence from Spanish Town, which deals with young people at risk, engaging them in the practice of beekeeping and agriculture.
Sports	WINDALCO also continues to develop sports programmes, supporting many sports competitions, such as cricket and soccer. The Company also assists students with holding the competitions in ping pong, chess and swimming.

Guinea

In Guinea, UC RUSAL is one of the largest foreign investors, not only in bauxite production but also in the social sphere, where the Company assists local authorities in fighting poverty in rural settlements.

The Company is involved in the development of the educational system in sub-prefectures Mambia and Friguiagbe, performing the construction and equipment of schools in some localities. In 2017, the roof of Nelson Mandela elementary school in the workers settlement of Debelle was repaired. The Company also paid for the acquisition of school equipment for schools in Mumbai and Debelle and organised catering during school exams.

The Company annually finances the acquisition of office supplies and school supplies for the students of four primary schools, two colleges and a lyceum. Assistance is provided through associations of pupils parents at the beginning of the school year.

The Company respects the culture and traditions of the country and assists in the construction of religious buildings (mosques and churches) in the city of Conakry and the Kindia region, handing over construction materials, and also provides financial assistance to mosques for religious holidays.

UC RUSAL also participates in the construction of basic infrastructure, in particular, to provide population with potable water. At the expense of the Company four artesian wells were drilled in the villages Mambia and Friguiagbe.

The company builds and repairs houses for employees, participates in the extension of the clinics of Simbay and Debelle. In addition, UC RUSAL built the Russian-Guinean research centre, which is used as a clinical site for field trials of vaccines against Ebola. (Please see detailed information about the cooperation in this area in the 'Fight against Ebola in the Republic of Guinea' section).

In the framework of activities to support social and economic development of the territories of operation, financial assistance is provided to four organisations of the Union of Producers of Mambia and four women production groups in Friguiagbe to fight for poverty reduction.

Ireland

RUSAL Aughinish Alumina Refinery is located on a peninsula in the countryside. There are several small towns nearby, where inhabitants are more or less linked to bauxite mining. The Company wants to maintain good relations with them based on respect and ethics. Projects are being carried out mainly to address local problems.

Project/area	Contents
Sports and leisure	Support for multiple local and national amateur game clubs by assisting in the organisation and implementation of various fund-raising activities, by supporting various fund-raising activities. These activities affect such sports as football, curling, sailing, basketball. All of these clubs are also funded largely by membership contributions of our employees. In 2017, the company has allocated funds to replace the engine in the lifeboat of the local yacht club Foynes.

Project/area	Contents
Art and culture	Every year, the Company helps organise the festival of modern art in the local village Asketon, the Company also supported one of the biggest local events of the year - the cultural festival of the nearest neighbors: the local community of the town of Borigon. At the request of the children, the shelters for observing wild birds living in the vicinity of the town of Aughinish, were repaired.
Education	The company pays considerable attention to the development of education in local communities. In 2017, the company supported the International Day of Sports for the Chemical Industry, the competition organised by the University of Limerick for the local students of chemistry, who are the potential employees of the production facility. A fund-raising event in the format of walks on nature trails was also held to raise money for the nearby village schools attended by the children of the employees. The company has helped another local school, which collected money for the school celebration in the Concert Hall of the Limerick University.
Community	Every year the company supports the local community of the Foynes district in conducting the annual air show. This event attracts more than 30 thousand spectators, and is an important source of income for local businesses. We support local voluntary community councils, youth organisations and action teams that conduct fundraising events throughout the year to raise money for the local community.
Charity	The Company also organises the annual charitable 10km race and 8km pedestrian walk for the employees on special paths in the neighbourhood of the production facility. The funds raised are donated to charity. In 2017, funds were raised for the Children's medical research foundation at children's hospital. The company has also supported the Mental Health Week in Limerick, promoting positive mental health in the local community.

Guyana

Since the beginning of its operations in Guyana in 2005, UC RUSAL implemented a permanent social investment programme. During the years of operation in the country, Bauxite Company of Guyana Inc. (BCGI, a joint company of UC RUSAL and the government of Guyana) has established a power and water infrastructure in its area of operation, as well as the possibility of receiving television programmes. The Company supports the proper state of local roads by using its own equipment and materials for this purpose.

The Company permanently leases vehicles to provide transportation between the village of Mapletown and the town of Linden both for the employees and members of their families, and for specific groups of local residents. Monthly free fuel is provided to ensure power generation in the nearby settlement Ituni, where more than 400 people live.

The bauxite mine is located in the interior of the country, where the indigenous people of the American Indian Hururu live. The Company has entered into a long-term land lease agreement with the local tribes and has been providing social assistance every year. **GRI MM5**

Social programmes and charitable actions of the Company contributed to the formation of close interaction with the local community in the country of operation.

Project	Contents
Support for indigenous people	In 2017, the Company supported the organisation of the month of cultural heritage of the indigenous people from the Hururu community. A number of charity actions for the high school in the Hururu village were carried out, including the transfer to the educational institution of sports equipment and tabletop games.
Education	The company finances the work of five teachers of the primary school in Aroaima. Both the children of employees and pupils from neighboring towns are enrolled in the school. The company also provided prizes for the winners of the school contest of knowledge. Regular financial assistance is provided to the preschool children's institution located in the same village. The Company permanently rents vehicles and provides fuel to ensure the delivery of 125 pupils to and from school both by land and water. In 2017, the international scholarship project, in which a group of Guyana youth was enrolled in People's Friendship University of Russia, was completed. The project was financed by UC RUSAL. After homecoming, five alumni of the university were employed at the Bauxite Company of Guyana.
Development of mass sports	The Company is a permanent sponsor of sports competitions. BCGI organises traditional Mini Olympiads involving teams from all business units. The company also facilitated the football and cricket competitions, to which the teams of residents from the neighbouring settlements were invited. Sports equipment and implements were purchased for local teams.

10. ABOUT THE REPORT

GENERAL INFORMATION ABOUT THE REPORT

This Sustainable Development Report of UC RUSAL (hereinafter the Report) reflects the main results of the Company's sustainable development management activities for the period from January 1, 2017 to December 31, 2017, and describes management approaches, activities and results achieved. **GRI 102-50**

The previous report was published in 2017 and set out the results of the Company's operations in 2016. The Company publishes sustainable development reports annually. Electronic versions of sustainable development reports are published on the corporate website of UC RUSAL: *http://sr.rusal.ru*. **GRI 102-51, GRI 102-52**

The report has been prepared in accordance with the core version of the GRI Sustainability Reporting Standards 2016. **GRI 102-12, GRI 102-54**

In addition, since 2016 UC RUSAL is governed by the requirements of the Environmental, Social and Governance Reporting Guide of HKEx (Hong Kong Exchanges and Clearing Limited) and also includes in the report information about the company's contribution to the achievement of the UN Sustainable Development Goals. (please see 'Management of aspects of sustainable development' of this Report) and about the compliance of its activities to the principles of the UN Global Compact.

The process of identification of material aspects

The definition of the content of the Report and the selection of material aspects are based on materiality analysis procedure, which includes the following steps. **GRI 102-46**

1. Compilation of a complete list of topics that can be reflected in the Report based on:
    - list of topics recorded in GRI Sustainability Reporting Standards
    - analysis of issues raised by the stakeholders within regular business processes (including direct requests by business partners);
    - review of press publications.
2. The rating of sustainable development aspects by means of:
    - survey of external and domestic stakeholders. (60 persons participated in the questionnaires, including 17 employees of UC RUSAL and 43 representatives of key stakeholders, including from public authorities and local authorities, local communities, general public, trade unions, shareholders, investment community.
    - review of material aspects identified by the international and Russian companies of the mining and metallurgical industry;
    - issues recognised as materials by industry associations (ASI Standard);
    - content of key sustainable development ratings;
    - opinions of the participants in the working group on non-financial reporting of UC RUSAL.

3. Adoption of the list of material aspects by the participants of the working group on non-financial reporting.

In order to compensate for the difference in the number of participants in the survey from staff and external stakeholders, the average score is displayed for each topic. In accordance with the results of the questionnaire, a ranking of topics by the degree of importance, reflecting the location of each topic, was prepared. In 2017, the wording of the topics was adjusted with due regard to the structure of the GRI Standards 2016. According to the decision of the working group the topic of product quality was included in the topics significant for the company. 17 topics were classified as significant.

- Health and safety in the workplace
- Air emissions including greenhouse gases
- Compliance with environmental legislation
- Effluents and waste, including recycling and reuse of waste
- Compliance with statutory and regulatory requirements
- Economic performance
- Energy consumption and energy efficiency
- Training and education of employees
- Remuneration of employees (by region) compared to the market
- Product Quality
- Water use and impact on water resources
- Investments in infrastructure, indirect impact on the economy of the regions of operation
- Land resources and impact on biodiversity
- Employment
- Impact on local communities, including cooperation and development programmes
- Bribery and corruption
- Interaction with trade unions and collective bargaining

Material aspects of the Report and the boundaries of the aspects GRI 102-47

	Material topic	Section of the Report	Within the boundaries of the Company GRI 103-1	Outside the Company GRI 103-1
Specific standard reporting elements				
Economic category	Economic performance	About The Company. Quality Management System. UC RUSAL Business System	✓	
Environmental category	Initiatives to reduce greenhouse gas emissions	Climate Change	✓	✓
	Compliance with the law	Corporate governance system. Internal controls (compliance procedures)	✓	✓
	Water use Emissions of pollutants Discharges and waste	Water resources Air emissions Waste	✓ ✓ ✓	
	Total expenditure and investment in environmental protection	Investments in environmental protection	✓	
	Products and services	QMS development. Scientific and technological development	✓	
	Transport	About the Company	✓	
Social category				
Labour practices and decent work subcategory	Health and safety in the workplace	Supply chain	✓	✓
	Employment	Staff structure and personnel movement	✓	
	Training and education	Education and development	✓	✓
Human rights subcategory	Human rights Freedom of association and collective bargaining	Ethics and human rights Social partnership	✓ ✓	✓
Society subcategory	Programmes for local communities	Investing in community development	✓	
	Bribery and corruption	Code of Ethics and ethics officers	✓	✓

Reporting boundary

The reporting perimeter includes the main production facilities of UC RUSAL located inside and outside Russia *(please see table below).*

Reporting perimeter GRI 102-45

Business unit	In the Russian Federation	Outside the Russian Federation
Aluminium Division	Bratsk Aluminium Smelter Novokuznetsk Aluminium Smelter Irkutsk Aluminium Smelter Nadvoitsy aluminium smelter Krasnoyarsk Aluminium Smelter Sayanogorsk Aluminium Smelter Kandalaksha aluminium smelter Khakas aluminium smelter	KUBAL (Sweden)
Alumina Division	Achinsk Alumina Refinery Bogosovsk Aluminium Smelter Urals aluminium smelter Boksit Timana North Urals Bauxite Mine	Windalco (Jamaica) Bauxite Company of Guyana (Guyana) Friguia bauxite and alumina complex (Guinea) Compagnie des Bauxites de Kindia (Guinea) Nikolaev Alumina Refinery (Ukraine)
New Projects Directorate	Powder Metallurgy-Volgograd Powder Metallurgy-Krasnoturyinsk Powder Metallurgy-Shelekhov Kremny, Silicon Ural etc.	ALSCON (Nigeria)
Packaging Division	SAYANAL foil rolling facilities, Ural Foil, Sayana Foil	ARMENAL foil rolling company (Armenia)

Data preparing

The data sources are from the official reporting forms that are provided annually to the state statistics authorities and the data from the management records. In this report following the clarification of the calculation methodology, the data in the table 'Created and allocated cost for the period 2014-2017' was changed. There were no other reformulations of the indicators for the reporting period. **GRI 102-48** Scope and boundaries of reporting: the boundaries for a number of human resources management indicators have been extended, and statements have been made in the text of the Report. **GRI 102-49** Financial performance is based on IFRS consolidated financial statements. The main indicators are shown in three-year dynamics.

The data presented in the Report is verified by the specialised units of UC RUSAL, the approval procedure for the Report implies the participation of the members of the Executive Committee. **GRI 102-32**

Acknowledgment

No external acknowledgment of non-financial reporting was performed. **GRI 102-56**

Contact data GRI 102-53

Postal & Mailing Address: Russia, 121096, Moscow, ul. Vasilisy Kozhinoy 1, marked '2017 Sustainable Development Report'
E-mail: csr@rusal.com
Fax: + 7 (495) 745-70-46

APPENDIX

Table of compliance of the Report with the GRI Standards, the UN Global Compact principles and the Environmental, Social and Governance Reporting Guide of HKEx

GRI standards and reporting elements		Report section/Comment	UN Global Compact	HKEx
GRI 102: Common reporting elements (2016)				
1. Organisation profile				
102-1	Organisation name	Profile		
102-2	Main brands, products and services	Key types of products		
102-3	Headquarters location	Profile		
102-4	Countries of operation	Profile		
102-5	Nature of ownership and legal form.	Shareholding structure		
102-6	Markets in which the organisation operates	Key types of products		
102-7	Scope of the organisation	Profile		
102-8	Information about employees and other workers	Profile		KPI B1.1
102-9	Organisation supply chain	Structure of the supply chain; System of working with suppliers; Management of SD aspects. Management structure		KPI B5.1
102-10	Significant changes in scale, structure, ownership of the organisation, or supply chain			
102-11	The precautionary principle	Innovations in aluminium production		
102-12	External initiatives	Interaction with stakeholders. Participation in industry organisations and international initiatives; About the report		

102-13	Membership in associations	Global SD objectives; Interaction with stakeholders. Participation in industry organisations and international initiatives		KPI 10
2. Strategy				
102-14	Statement of the most senior decision maker in the organisation	Address of UC RUSAL President		para 9, 10
102-15	Key impacts, risks and opportunities	Risk management system. Risk analysis		para 9, 10
3. Ethics and integrity				
102-16	Organisation's values, principles, standards and norms of conduct	Internal control Ethics and human rights. Management approach	1	
102-17	Mechanisms for consultation on ethical matters	Code of Ethics and ethics officers; Hotline.	1	KPI B7.2
4. Corporate governance				
102-18	Corporate governance structure	Management bodies; Committees of the Board of Directors		
102-19	Delegation of authority	Management bodies and senior management; Management of SD aspects. Management structure		
102-20	Manager/managers responsible for economic, environmental and social issues	Management of SD aspects. Management structure		
102-21	Consultation on economic, environmental and social issues with stakeholders	Risk analysis; Monitoring, reporting and performance evaluation; Outline of activity in terms of human rights; Management of the aspects of sustainable development. Management structure		
102-22	Composition of the highest corporate body and its committees	Board of Directors, Committees of the Board of Directors		
102-23	Chairman of the highest body of corporate governance	Board of Directors		

102-24	Procedures for nomination and selection of candidates for membership of the highest body of corporate governance	Board of Directors		
102-25	Conflict of Interest	Company position and related actions with regard to the conflict of interest are stated in the Code of Ethics, section 3.6 Please also see the section 'Board of Directors'		
102-26	Role of the highest corporate governance authority in formulating the goals, values and strategy of the organisation	Board of Directors, Committees of the Board of Directors		para 8
102-27	The collective knowledge of members of the highest authority in relation to economic, environmental and social issues	Performance evaluation and training		
102-28	Procedure for evaluation of the work of the highest body of corporate governance	Performance evaluation and training		
102-29	The role of the highest corporate governance body in identifying and managing economic, environmental and social impacts	Risk analysis; Management of SD aspects. Management structure		para 9, 10
102-30	The effectiveness of risk management	Committees of the Board of Directors; Monitoring, reporting and performance evaluation		para 9, 10
102-31	Analysis of the economic, environmental and social topics	Monitoring, reporting and performance evaluation		para 9, 10
102-32	The role of the highest corporate governance body in preapring the reporting on sustainable development	About the report. Data preparing		para 8
102-33	Procedure for informing the highest corporate authority about critical issues	Risk analysis		

102-34	Nature and total number of critical issues brought to the attention of the highest corporate governance body	Management of SD aspects. Management structure		
102-35	Compensation policy	Committees of the Board of Directors		
102-36	Procedure for the determination of the compensation	RUSAL Annual Report 2017. Remuneration and benefit policies		
102-37	Involvement of stakeholders in the determination of the amount of compensation			
102-38	The ratio of the total annual compensation of the highest paid official to the average annual remuneration of all employees			
102-32	The ratio of the percentage of growth of the total annual compensation of the highest paid official to the percentage of growth of the average annual remuneration of all employees	About the report		
5. Interaction with stakeholders				
102-40	List of stakeholder groups	Management approach		para 6
102-41	Collective bargain agreements	Collective bargain agreements Social partnership	3	
102-42	Identification and selection of stakeholders	Management approach		para 6
102-43	Approach to the organisation of stakeholder relations	Organisation of interaction with stakeholders		para 6; KPI B6.2
102-44	Key themes and concerns raised by the stakeholders	Organisation of interaction with stakeholders		para 6;KPI B6.2
6. Reporting practice				
103-1	Material aspects and boundaries	About the report		para 9, 10
102-45	Legal entities whose reports were included in the consolidated financial statements	About the report		para 9, 10
102-46	Definition of report content and aspect boundaries	About the report		
102-47	The list of material aspects	About the report		

102-48	Reformulation of information	About the report		
102-49	Changes in reporting	About the report		para 9, 10
102-50	Reporting period	About the report		
102-51	Date of publication of the previous report	About the report		
102-52	Reporting cycle	About the report		
102-53	Contact person for inquiries about the report	About the report		
102-54	Statement on the preparation of the report in accordance with GRI	General information about the Report		
102-55	GRI Content Index	Appendix		
102-56	External acknowledgment	About the report		para 7
201 Economic performance (2016)				
103-2	Management approaches	Performance management		para 9, 10
201-1	Direct economic value created and distributed	Strategy and SD. Strategy		KPI B8.2
201-2	Financial aspects and other risks and opportunities for the organisation's activities related to climate change	Processes and products. Products. Actions to reduce carbon footprint		
201-3	The coverage of organisation's commitments related to pension plans with fixed benefits	The workers of UC RUSAL participate in the pension plans of the countries of operation. The Company allocates funds for the future pensions of its employees pro rata to the amount of the payroll. Targeted funds have been established for this purpose in different countries. Please see also section 'Value created and distributed'		
201-4	Financial assistance received from the state	STD. Management approach		

GRI 202: Market presence (2016)				
103-2	Management approaches	Salaries		para 9, 10; Aspect B1 Employment: General Disclosure
202-1	The ratio of standard entry level wage for employees of different sexes to the established minimum salary in significant regions of operation of the organisation	Motivation and remuneration		
202-2	Share of senior managers in the material areas of operation of the organisation, recruited from the local population	Staff description		
GRI 203 Indirect economic impact				
103-2	Management approaches	Management of social investment in Russia		para 9, 10
203-1	Infrastructure investment and gratuitous services	Investing in community development	8, 9	KPI B8.1
203-2	Material indirect economic impacts	Management of social investment in Russia Investment in the development of local communities; Social investments abroad	8, 9	
GRI 204 Procurement practices (2016)				
103-2	Management approaches	System of interaction with suppliers		para 9, 10
204-1	Share of spending on local suppliers			
GRI 205 Fight with corruption (2016)				
103-2	Management approaches	Fight against corruption and fraud prevention; Ethics and human rights. Management approach	10	para 9, 10; Aspect B7 Anti-corruption: General Disclosure; KPI B7.2
205-1	The activity that underwent assessment of risks related to corruption	Fight against corruption and fraud prevention	10	
205-2	Information on anti-corruption policies, practices and training	Fight against corruption and fraud prevention, Hotline; Ethics and human rights. Management approach	10	
205-3	Confirmed cases of corruption and actions taken	Fight against corruption and fraud prevention	10	Aspect B7 Anti-corruption: General Disclosure; KPI B7.1

GRI 206 Competition obstruction (2016)				
103-2	Management approaches	Internal Control System		para 9, 10
206-1	Legal action against the organisation in connection with the obstruction of competition and violation of antimonopoly law			
GRI 301 Materials (2016)				
103-2	Management approaches	Purchase of raw materials and supplies for the production of the main products		Aspect A2 Use of Resources: General Disclosure; para 9, 10; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
301-1	Spent materials by mass or volume			
301-2	Materials representing recycled or reusable waste	Waste	8	
301-3	Reused products and their packaging	Waste		KPI A2.5
GRI 302 Energy (2016)				
103-2	Management approaches	Energy consumption. Approach		Aspect A2 Use of Resources: General Disclosure; para 9, 10; KPI A2.3; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
302-1	Energy consumption within the organisation			KPI A2.1
302-2	Energy consumption outside the organisation			
302-3	Energy intensity	Energy consumption. Results	8	KPI A2.1
302-4	Reduce energy consumption	Energy consumption. Results	8	KPI A2.3
302-5	Reduction in energy intensity of products and services			KPI A2.3

GRI 303 Water (2016)				
103-2	Management approaches	Strategy; environmental protection Approach Water resources. Approach		Aspect A2 Use of Resources: General Disclosure; para 9, 10; KPI A2.4; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
303-1	Water drawn by source	Dynamics of water drawing and use of fresh water for production needs	8	KPI A2.2.
303-2	Water sources that are significantly influenced by the water drawing of the organisation	Water drawn by source	8	KPI A3.1
303-3	Share and total volume of water reused	The share of circulating and recycling water supply	8	KPI A2.4
GRI 304 Biodiversity (2016)				
103-2	Management approaches	Strategy; environmental protection Approach		para 9, 10; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
304-1	Production sites owned, leased or administered by the organisation and located in protected natural territories and territories with high value of biodiversity beyond the boundaries of protected natural territories, or adjacent to such territories	Biodiversity. Approach	8	
304-2	Significant impacts of activities, products, and services on biodiversity	Biodiversity. Results		KPI A3.1
304-3	Habitats protected or restored	Biodiversity. Results		
304-4	Total number of species listed in the IUCN Red List and national list of protected species, habitats of which are within the territory affected by the activities of the organisation			

GRI 305 Emissions (2016)				
103-2	Management approaches	Strategy; environmental protection Approach Air emissions. Approach		Aspect A1 Emissions: General Disclosure; KPI A1.5; para 9, 10; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
305-1	Direct greenhouse gas emissions	Direct emissions of greenhouse gases from reduction areas		KPI A1.1 KPI A1.2
305-2	Indirect energy emissions of greenhouse gases			KPI A1.1 KPI A1.2
305-3	Other indirect greenhouse gas emissions			KPI A1.1 KPI A1.2
305-4	Intensity of greenhouse gas emissions	Direct specific emissions of greenhouse gases of the reduction areas		KPI A1.2
305-5	Reduction of greenhouse gas emissions	Actions to reduce carbon footprint	7,8,9	KPI A1.5
305-6	Emissions of ozone-depleting substances			KPI A1.1
305-7	Emissions of NOx, SOx and other significant pollutants	Emissions of polluting substances into the atmosphere (excluding carbon monoxide)		KPI A1.1 KPI A1.5, A1.6
GRI 306 Discharges and wastes (2016)				
103-2	Management approaches	Strategy; environmental protection Approach Wastes, Approach		Aspect A1 Emissions: General Disclosure; para 9, 10; KPI A1.6; Aspect A3 of The Environment and Natural Resources: General Disclosure; KPI A3.1
306-1	Total volume of discharges indicating the quality of the drain water and the receiving facility	Dynamics of discharge of industrial wastewater	8	KPI A1.1.
306-2	Total waste mass by type and methods of treatment	Dynamics of generation, disposal and processing of wastes excluding overburden	8	KPI A1.3 KPI A1.4 KPI A1.6
306-3	Significant spills	Environmental protection Management structure	8	KPI A3.1
306-4	Transportation of hazardous wastes	Wastes. Results		KPI A1.6, KPI A1.3.

306-5	Water sources, which experience a significant impact from the discharge of waste waters by the organisation			KPI A3.1
GRI 307 Compliance with environmental requirements (2016)				
103-2	Management approaches	Environmental protection Management structure		para 9, 10
307-1	Cases of non-compliance with environmental standards and requirements	Environmental payments for environmental pollution		Aspect A1 Emissions: General Disclosure
GRI 308 Environmental assessment of suppliers (2016)				
103-2	Management approaches			para 9, 10; Aspect B5 Supply Chain Management: General Disclosure; KPI B5.2
308-1	New suppliers assessed according to environmental criteria			KPI B5.2
308-2	Negative environmental impact in the supply chain and actions taken			KPI B5.2
GRI 401 Employment (2016)				
103-2	Management approaches	Employees. Management approach Ethics and human rights. Management approach	1	para 9, 10; Aspect B1 Employment: General Disclosure
401-1	Newly recruited employees and turnover	Staff description	6	KPI B1.2
401-2	Benefits granted to full-time employees, which are not granted to part-time employees	UC RUSAL provides the same social package to all full-time employees. Please see also 'Occupational Medicine'		
401-3	Provision of maternity/ paternity leave	Leave entitlement		
GRI 402 Staff-management relationships (2016)				
103-2	Management approaches	Social partnership		para 9, 10
402-1	Minimum period of notification for significant changes in the organisation's operations, and whether it is determined in the collective agreement	Employee communication mechanisms	3	

GRI 403 Health and safety (2016)				
103-2	Management approaches	Work safety; Training. Performance		para 9, 10 Aspect B2 Health and Safety: General Disclosure; KPI B2.3
403-1	Share of all staff represented in the official joint committees on health and safety	Work safety. Collective bargain agreements	3	
403-2	Industrial injuries, occupational diseases, lost day rate and absentee rate, total number of fatalities	Work safety. Occupational medicine	1	KPI B2.1; KPI B2.2
403-3	Workers with high injury rate and high risk of diseases associated with their occupation	Work safety. Activities. Occupational medicine		
403-4	Reflection of health and safety issues in formal agreements with trade unions	Work safety. Collective bargain agreements	1	
GRI 404 Training and education (2016)				
103-2	Management approaches	Education and development. International programme of education of students from Guinea		para 9, 10; Aspect B3 Development and Training: General Disclosure
404-1	Average number of training hours per employee			KPI B3.2
404-2	Programmes of skills development and education, including with the aim of providing support after career ending	Internal talent pool; training and education; UC RUSAL corporate training and development system; Modular system of vocational training; Distance learning; Education of employees at universities		Aspect B3 Development and Training: General Disclosure
404-3	Share of employees undergoing regular performance and career development assessments	Technological minimum Motivation and remuneration. Main results in 2017		

GRI 405 Diversity and equal opportunity (2016)				
103-2	Management approaches	Content of the business in terms of human rights		para 9, 10; Aspect B1 Employment: General Disclosure
405-1	The diversity of corporate governance bodies and employees	Board of Directors		KPI B1.1
405-2	Ratio of basic salary of men and women	Content of the business in terms of human rights		
GRI 406 Non-discrimination (2016)				
103-2	Management approaches	Ethics and human rights. Management approach	6	para 9, 10; Aspect B1 Employment: General Disclosure
406-1	Number of cases of discrimination and corrective actions taken	Ethics and human rights. Management approach	6	
GRI 407 Freedom of association and collective bargaining (2016)				
103-2	Management approaches	Code of Ethics and corporate ethics officers. Social partnership	3	para 9, 10
407-1	Business units and suppliers, whose right to use freedom of association and collective bargaining may be violated or at considerable risk	Social partnership Content of the business in terms of human rights	3	
GRI 408 Child labour (2016)				
103-2	Management approaches	Ethics and human rights. Management approach	5	para 9, 10; Aspect B4 Labour Standards: General Disclosure; KPI B4.1; KPI B4.2
408-1	Business units and suppliers with a significant risk of child labour	Ethics and human rights. Management approach; Outline of activities in terms of human rights	5	KPI B4.1; KPI B4.2
GRI 409 Forced or compulsory labour (2016)				
103-2	Management approaches	Ethics and human rights. Management approach	4	para 9, 10; Aspect B4 Labour Standards: General Disclosure; KPI B4.1; KPI B4.2
409-1	Business units and suppliers with significant risk of forced or compulsory labour	Ethics and human rights. Management approach. Content of the business in terms of human rights	4	KPI B4.1; KPI B4.2

GRI 410 Security practices (2016)				
103-2	Management approaches			para 9, 10
410-1	Share of security officers trained in policies and procedures on human rights aspects	Security		
GRI 411 Rights of indigenous peoples (2016)				
103-2	Management approaches	Ethics and human rights. Management approach		para 9, 10
411-1	Violations of the rights of indigenous peoples	Ethics and human rights. Management approach; Local communities		
GRI 412 Assessment of human rights (2016)				
103-2	Management approaches	Ethics and human rights. Management approach		para 9, 10
412-1	Assessment for compliance with human rights or impacts in connection with human rights	Ethics and human rights. Management approach; Outline of activities in terms of human rights		
412-2	Training of employees in policies or procedures in human rights	Content of the business in terms of human rights		
412-3	Significant investment agreements and contracts that include provisions on human rights or that have been tested on the observance of human rights			
GRI 413 Local Communities (2016)				
103-2	Management approaches	Investing in community development		para 9, 10; Aspect B8 Community Investment: General Disclosure
413-1	Share of business units with implemented programmes of interaction with local communities, programmes of assessment of the impact on local communities and community development programmes	Investing in community development		
413-2	Business units with significant actual and potential negative impact on local communities			

GRI 414 Social assessment of suppliers (2016)				
103-2	Management approaches			para 9, 10; Aspect B5 Supply Chain Management: General Disclosure; KPI B5.2
414-1	The percentage of new suppliers assessed using social criteria	Requirements for suppliers in the field of health and safety		KPI B5.2
414-2	Negative social impacts in the supply chain and actions taken			KPI B5.2
GRI 415 Public policy (2016)				
103-2	Management approaches			para 9, 10
415-1	Monetary expression of organisation's donations for political purposes			
GRI 416 Health and safety of the consumer (2016)				
103-2	Management approaches			para 9, 10; Aspect B6 Product Responsibility: General Disclosure
416-1	Impact of assessment of categories of products and services on health and safety			
416-2	Total number of cases of non-compliance with regulatory requirements and voluntary codes regarding the impact on the health and safety of products and services, by types of consequences	Customer communication		Aspect B6 Product Responsibility: General Disclosure
GRI 417 Marketing and labelling (2016)				
417-1	Types of information about the properties of the products and services required by procedures	Product labelling		
417-2	Total number of cases of non-compliance with regulatory requirements and voluntary codes regarding the information and marking about the properties of products and services	Product labelling		Aspect B6 Product Responsibility: General Disclosure

417-3	Cases of non-compliance with regulatory requirements and voluntary codes regarding marketing communications			Aspect B6 Product Responsibility: General Disclosure
GRI 418 Consumer privacy protection (2016)				
418-1	Total number of substantiated complaints regarding breaches of privacy of the consumer and loss of consumer data	None		Aspect B6 Product Responsibility: General Disclosure; KPI KPI B6.2
GRI 419 Compliance with legislation in the social and economic sphere (2016)				
103-2	Management approaches	Compliance		para 9, 10
419-1	Failure to comply with laws and other regulatory requirements in the social and economic sphere			Aspect B1 Employment: General Disclosure Aspect B2 Health and Safety: General Disclosure; Aspect B4 Labour Standards: General Disclosure; Aspect B6 Product Responsibility: General Disclosure; Aspect B7 Anti-corruption: General Disclosure

GRI reporting elements industry application for the companies of the mining and metallurgical industry.

GRI standards and reporting elements		Report section/ Comment
MM1	Number of lands (owned or leased) used for production activities, disturbed and reclaimed	Land resources
MM2	Number and share of sites requiring plans for the management of biodiversity, and those that have such plans	Absent in 2017
MM3	Total volume of overburden and hard rock, tailings and mud and their associated risks	Waste Land resources
MM4	Number of strikes and lockouts lasting more than a week, by country	Absent in 2017
MM5	Total number of works in the territories of indigenous and small peoples and related territories, number and share of operations or sites where there are formal agreements with communities of indigenous and small peoples	Social investments abroad. Guyana Local communities. Results in 2017
MM6	Number and description of significant land-use disputes and the rights of indigenous and small peoples based on custom	Absent in 2017
MM7	Use of complaints mechanisms in resolving disputes with local communities and indigenous peoples related to land use based on custom, and their results	Local communities. In 2017 there were no complaints
MM8	The number and share of sites in areas, where artisanal or small-scale development is taking place, or adjacent areas, associated risks and actions taken to manage and mitigate those risks	Absent in 2017
MM9	Organisation's site, where resettlement took place, number of households resettled at each site and the influence of this process on income	Investing in community development
MM10	Number and share of works associated with the planned closing of the production facilities	Absent in 2017