



ALUMINIUM
ASSOCIATION

THE ALUMINUM DEVELOPMENT IN RUSSIA: ALUMINIUM SOLUTIONS FOR SUSTAINABLE FUTURE

14th Aluminum Raw Materials Summit
Guangzhou, May 23-24, 2024



Aluminium Association: Connecting markets

140

Companies,
organizations,
R'n'D centers

>70%

Downstream
production

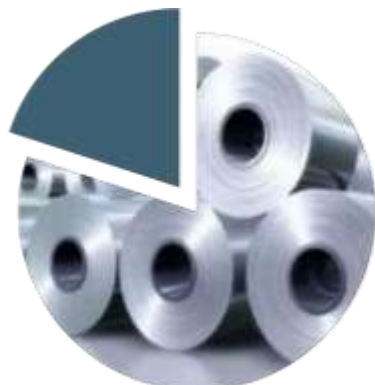
Member Companies' Share in Domestic Output

Foil



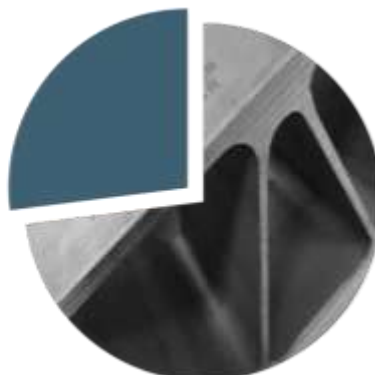
100%

FRP



80%

Extrusion

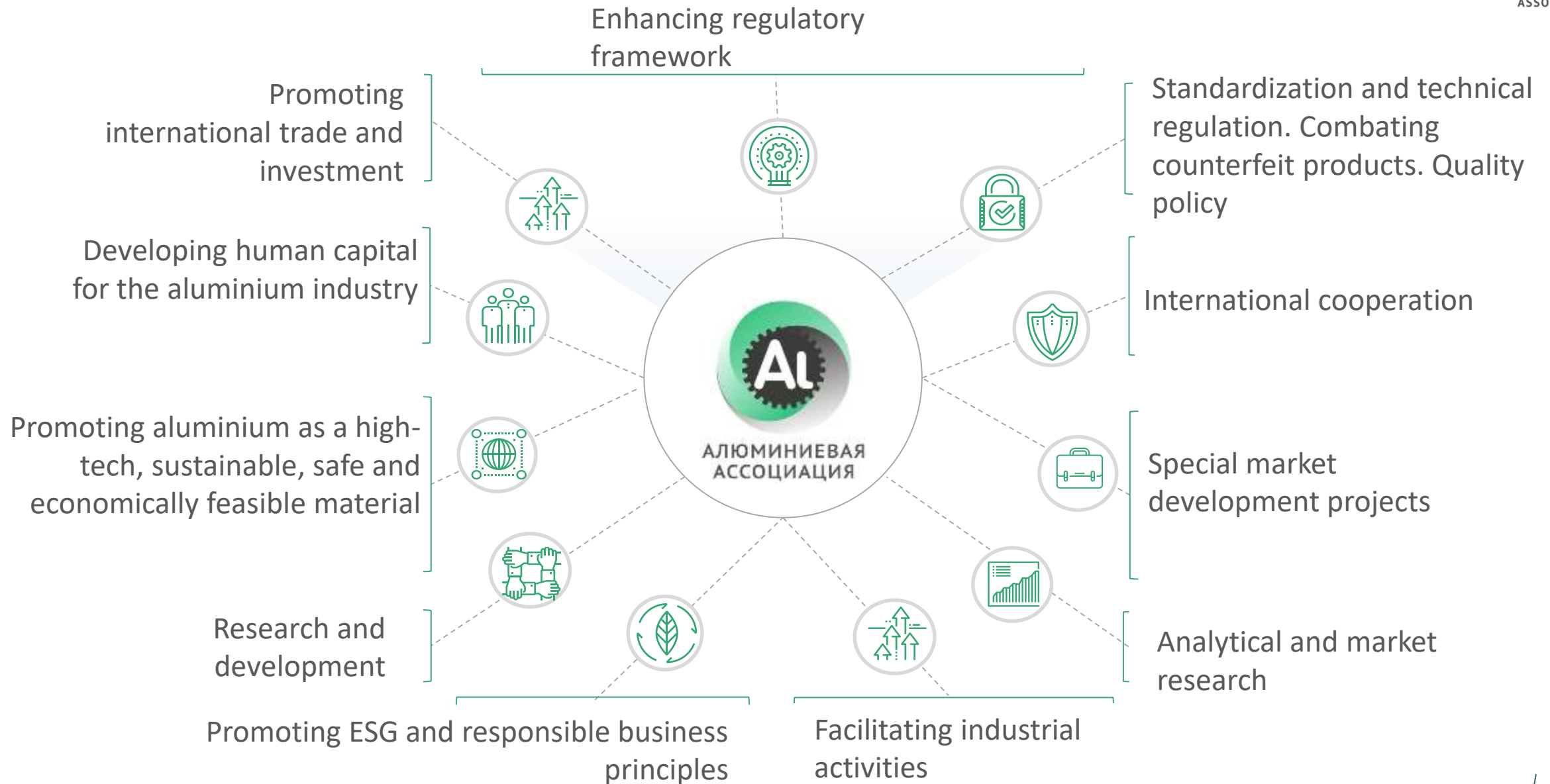


73%

Our Mission



Priority lines of work of the Association



Russian Aluminum Industry: Processing Stages and Production Capacities

UPSTREAM: UNWROUGHT ALUMINIUM AND ALLOYS

PRIMARY PRODUCTION

4 Mln tons



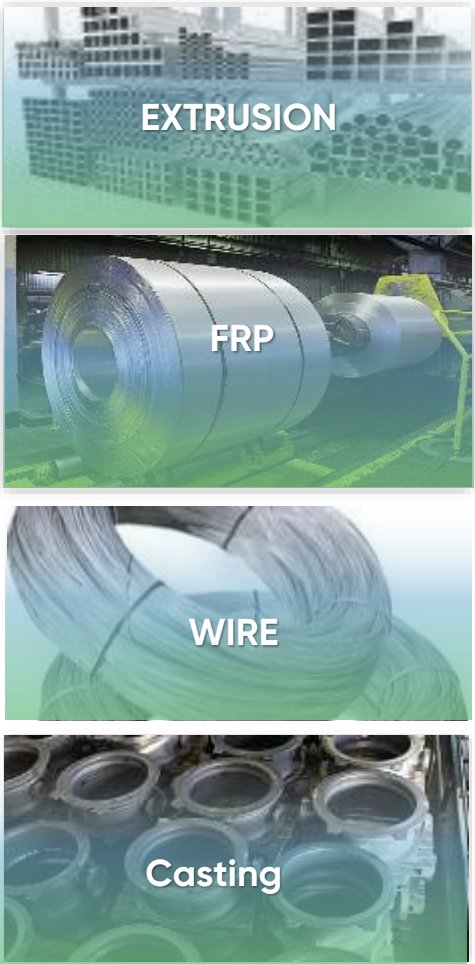
RECYCLING SEGMENT

1 Mln tons



DOWNSTREAM: SEMIS PRODUCTION

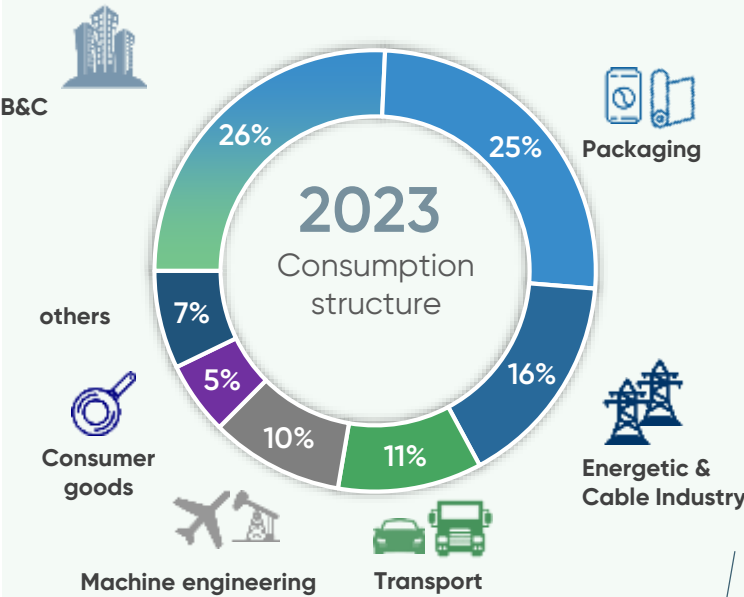
1,8 Mln tons



END-USE: HIGH VALUE-ADDED PRODUCTS MANUFACTURING

1,4 Mln tons
Current demand

- Aerospace
- Automotive
- Others transport
- Bridge building
- Building & Construction
- Energetics
- Electronics
- Cable industry
- Chemistry production
- Packaging
- Consumer goods
- Etc



Our aluminium shapes your everyday life

Primary Foundry Alloys



Wheels and Casting



Wire rod



Power cables



Billets



Solar panels



High Purity Aluminium



Hard disk drive



Slabs



Flat Rolled
Products




Note: all the applications given here are for illustrative purpose only and are not limited to the above

Russia is one of the Top-3 World largest primary aluminium producers

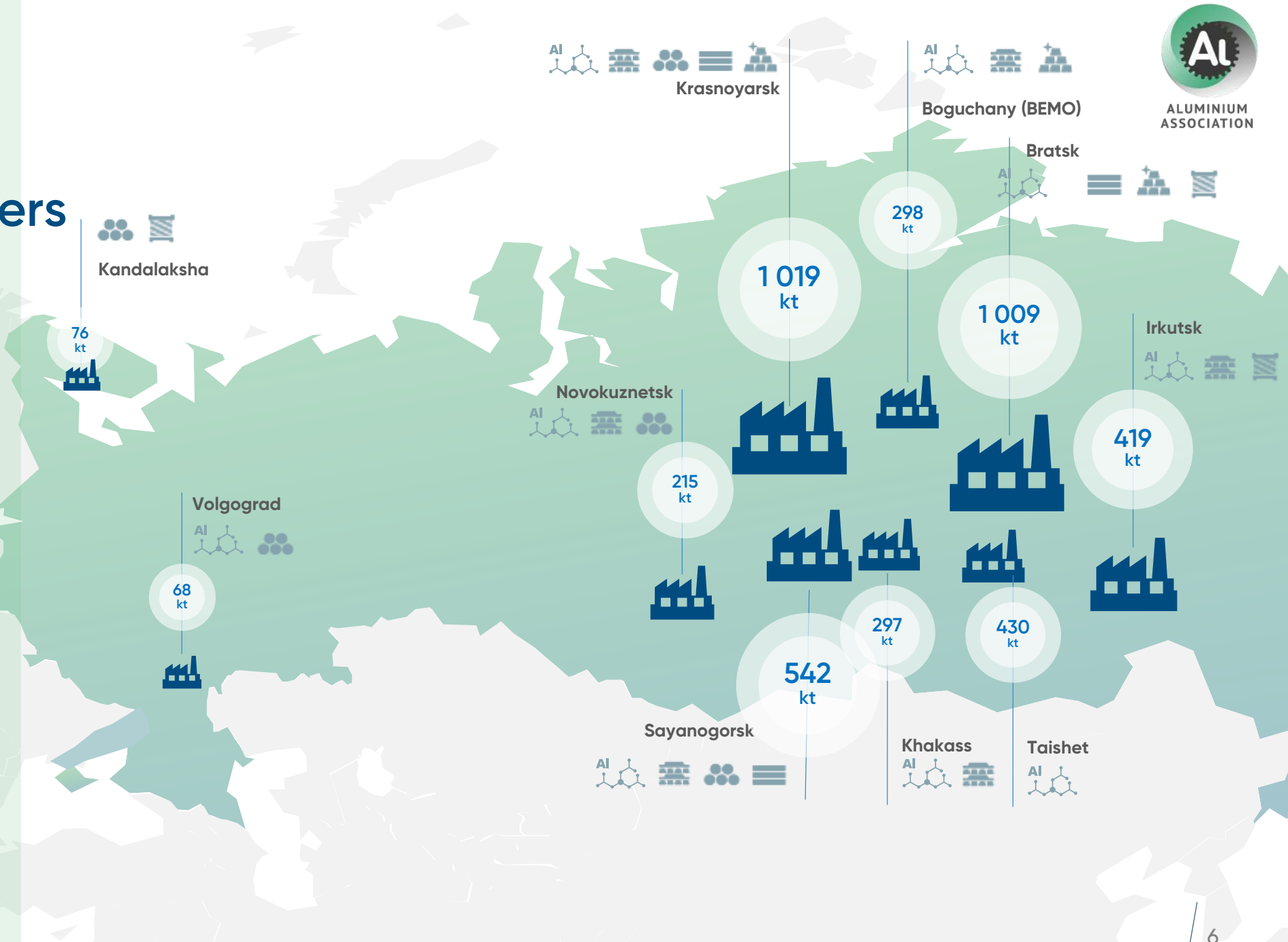
with >90-year storyline

RUSAL SYSTEM:
ALUMINIUM SMELTERS
IN OPERATION

 Aluminium smelter in operation

XX Production level 2019, kt

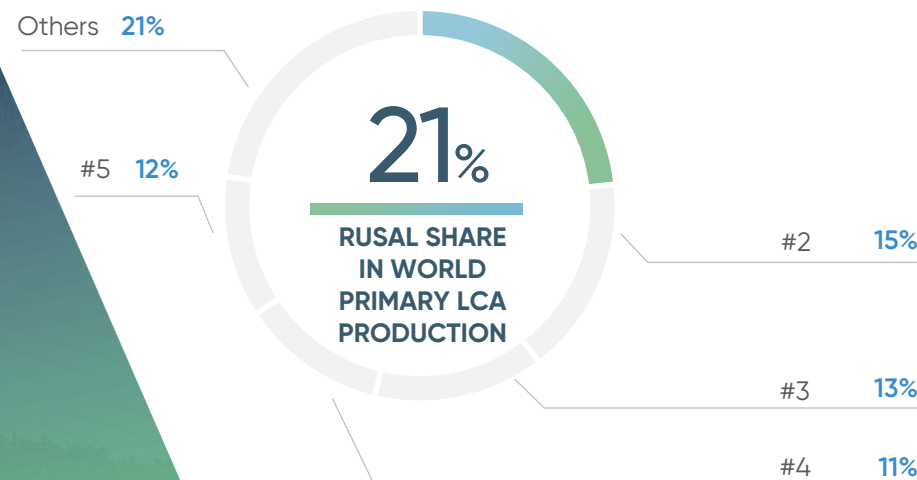
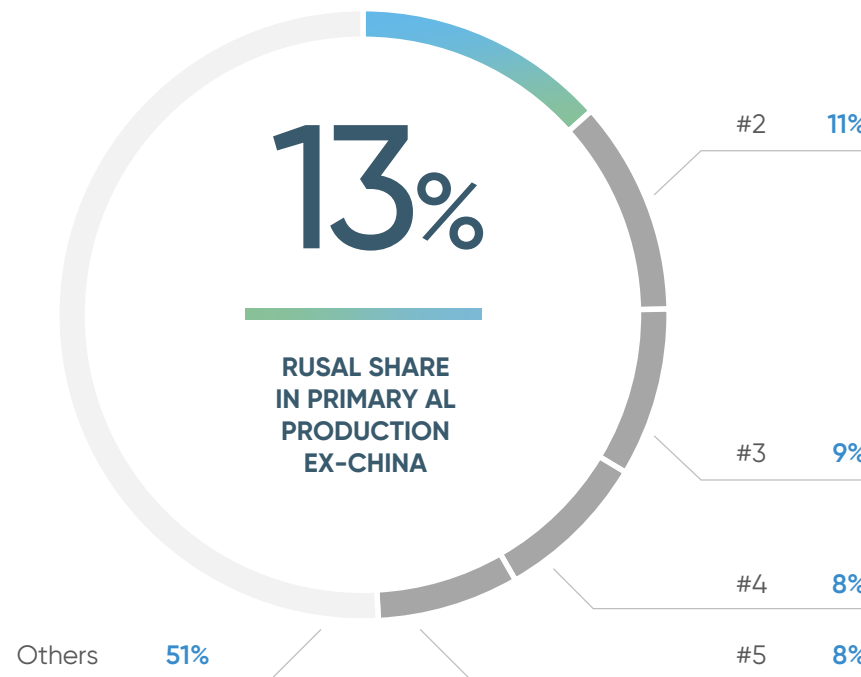
-  Ingots
-  Billets
-  Wire rod
-  PFA
-  Slabs
-  High purity



RUSAL is #1
primary aluminium
producer ex-China
and
#1 low carbon
aluminium producer
globally

>90%

Aluminium produced
with hydropower



RUSAL
ACCOUNTED
FOR:

5.6%

Of the world's
alumina output

6.3%

Of the world's
aluminium production

18%

Of the world's
aluminium output
based on hydropower

New capacities are in the pipeline: high-end technology, low carbon footprint

TAISHET ALUMINIUM SMELTER

On 16 December 2021, the first electrolyzers were put into trial operation.

TAZ will produce VAPs with a low carbon footprint

1st stage
capacity

430
ktpa

2nd stage
capacity

+540
ktpa

Taishet Anode Plant

Construction
of the Taishet
Anode plant
continues

Expected capacity
of green anodes
by 2024

400
ktpa

BEMO PROJECT: BOGUCHANSKY SMELTER AND BOGUCHANSKAYA HPP

50/50 JV with RusHydro

Up to ~360 ktpa of VAP, including 120 ktpa for the 1st stage.

In 2021, 292 ktpa were produced, which is 2 ktpa more than in 2020

VAP production

1st stage
capacity

120
ktpa

2nd stage
capacity

+240
ktpa

Total capacity

1st potline
launched
in March 2019

300
ktpa

Projected
capacity
(both stages)

600
ktpa

RUSAL has pledged to reduce its carbon footprint by 2050

ALLOW

LOW-CARBON ALUMINIUM

ALLOW is a bespoke brand for low carbon aluminium with a certified carbon footprint. ALLOW delivers independently verified carbon footprint statements, traceability to individual smelter of origin, societal benefits for more sustainable future, available worldwide

INDUSTRY
AVERAGE

12.5

t CO_{2eq}/t Al,
at-smelter
Scope 1&2

16.8

t CO_{2eq}/t Al,
full-scope
Scope 1, 2, 3

ALLOW
CARBON FOOTPRINT

2.3

t CO_{2eq}/t Al,
at-smelter
Scope 1&2

5.9

t CO_{2eq}/t Al,
full-scope
Scope 1, 2, 3

2032

-25%

greenhouse gas
emissions reduction*

2050

-47%

greenhouse gas
emissions reduction*

Inert anode technology is a cornerstone of RUSAL's Climate Strategy

**ALLOW
INERTA**

LOWEST CARBON FOOTPRINT

Applied to the entire primary aluminium, inert anode technology will save 100m t CO₂eq/y or double the total annual emissions of Portugal

INDUSTRY
AVERAGE

12.5

t CO₂eq/t Al,
at-smelter
Scope 1&2

ALLOW INERTA
CARBON FOOTPRINT

<0.5

t CO₂eq/t Al,
at-smelter
Scope 1&2

16.8

t CO₂eq/t Al,
full-scope
Scope 1, 2, 3

<2.5

t CO₂eq/t Al,
full-scope
Scope 1, 2, 3

RUSAL pioneers the breakthrough inert anode technology for the lowest carbon footprint in the primary industry.

Like hydrogen for the steel industry, technology of producing aluminium using inert anode process is how the aluminium industry will achieve zero emissions in smelting.

CLIMATE BENEFITS
OF ALLOW INERTA

-99.5%

t CO₂eq/t Al,
at-smelter
Scope 1&2

-87%

t CO₂eq/t Al,
full-scope
Scope 1, 2, 3

Aluminium semis consumption in Russia will double over the next 10 years

CAGR 7%

Aluminum consumption growth potential, mln t



CONSTRUCTION

- ▶ Implementation of innovative solutions, "green" construction

9%



TRANSPORT

- ▶ Expansion of infrastructure for electric vehicles, innovative rail trains, etc.

10%



ENERGY

- ▶ New alloys development

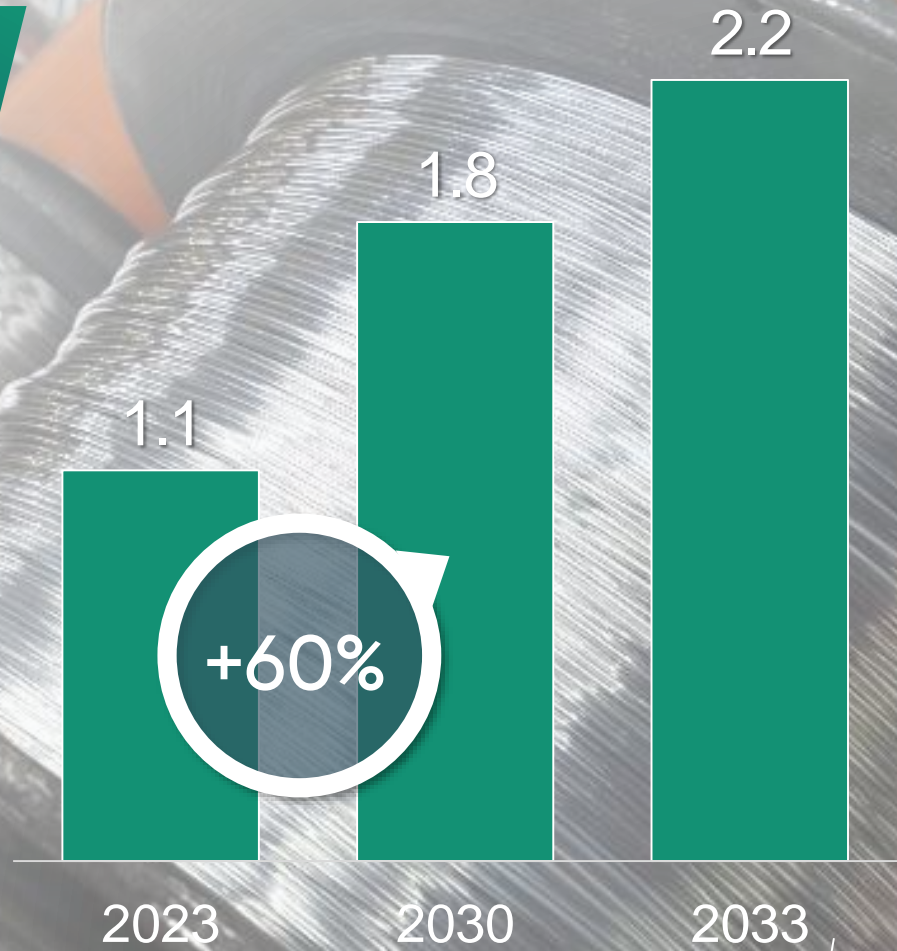
4%



PACKAGING, FMCG

- ▶ Growing demand for sustainable products, including containers and packaging

6%



Aluminium Consumption Development Projects

TANK CONTAINER WITH ALUMINIUM INTERNAL TANK



ALUMINIUM COMPONENTS AND BODY PARTS



ALUMINIUM COMPONENTS FOR TRAMS



ALUMINIUM SHIPS



ALUMINUM FREIGHT CARS



ALUMINIUM AVIATION CONTAINERS

Aluminium Products In National Projects and Renovation Programs



FIRST AUTOMOBILE ALUMINIUM BRIDGE



ALUMINIUM SELF-SUPPORTING MESH SHELLS



INNOVATIVE CABLES FOR HOUSING CONSTRUCTION



RAPIDLY CONSTRUCTED ALUMINIUM STRUCTURES FOR REGIONAL AIRPORT INFRASTRUCTURE



ALUMINIUM SOLUTIONS FOR RENOVATION OF SOCIAL INFRASTRUCTURE FACILITIES



ALUMINIUM PEDESTRIAN BRIDGES

To support aluminium industry we develop Industrial Special Economic Zones (SEZ)



Republic of Khakassia in numbers

Industries share in GRP

19%	10%	15%
processing	resources	energy

84% Metallurgy share in processing industry

530	349
thous people	thous people
population	labour

SEZ status since **2020**

Registered residents **5**

Wheels, aluminium profile, special machinery producers and recycler



Krasnoyarsk



Sayanogorsk

We are glad to welcome partners to develop aluminium future together!

Industrial production special economic zones provide huge possibilities for aluminium users



Khakas Technological Valley

Republic of Khakassia



311,36 ha
total area of
the territory



Partnership with the smelter
for liquid ALLOW aluminium



Creating your own production

- Automotive components
- Building materials
- Other aluminium products



ALLOW
ALUMINIUM
POWERED BY
THE LARGEST
HYDRO POWER
PLANT IN RUSSIA



Thank you!

Artem ASATUR

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