



# Evaluation of the total ERG Group contribution to the social and economic development of the Republic of Kazakhstan

Study for 2021-2022

October 2023

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# Project objectives were achieved as follows:



Project assessing ERG's total social and economic contribution to the social and economic development of Kazakhstan in 2021-2022

Collection and processing of statistics for modeling

Collection and processing of the Group's financial and economic, and production data for modeling

Update and adjustment of the economic model of Kazakhstan

Modelling ERG's total economic contribution at the national level for 2019-2020

Modelling ERG's total economic contribution at the regional level for 2019-2020

Presentation of the project outcomes

# Key results of ERG's social and economic contribution assessment



Total contribution of ERG to the social and economic development of Kazakhstan in 2019-2020 was:



Creating added value in the economy

**KZT 4.9 trillion**  
Contribution to GDP of Kazakhstan

**KZT 8.2 trillion**  
economic production



Business development support



Job creation and support

**169 thousand employees\***  
of people employed

**KZT 973 billion**  
earned by the nation

**KZT 1 083 billion**  
of budget revenues



Replenishment of state revenues



Increase of human wellbeing

What does it mean for the economy of Kazakhstan?

**2,55 %** of Kazakhstan's GDP was generated by ERG in 2022.

**116 thousand** of additional jobs in the national economy were supported in 2022

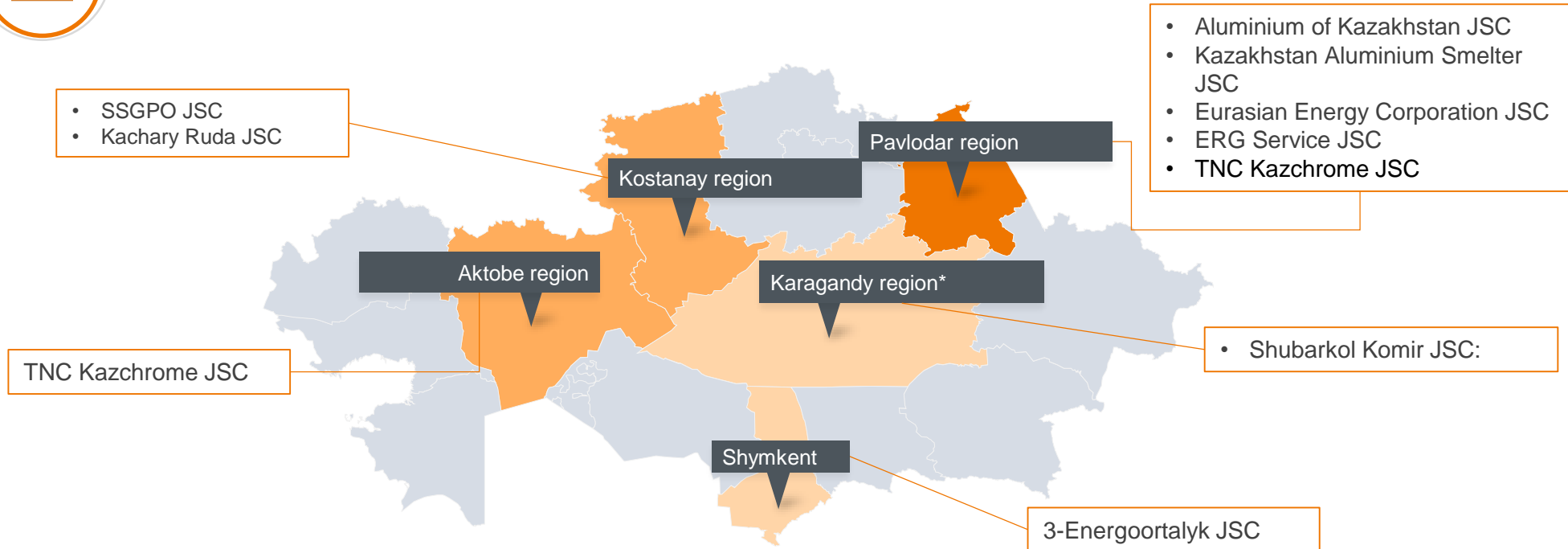
**KZT 80** of additional added value in the economy is created for every 100 KZT of ERG's added value added as a result of the Group's operations

\* On average for 2021-2022



## Regions where ERG operates

List of ERG companies included in the study perimeter



\*When assessing the contribution for 2022, statistical data on Karagandy and Ulytau regions were used (in total)



### Non-productive assets outside the scope of the study

- Eurasian Group LLP (Corporate Center)
- ERG Commercial Center LLP
- Business & Technology Services LLP
- ERG Research Engineering Center LLP
- ERG Capital Projects LLP

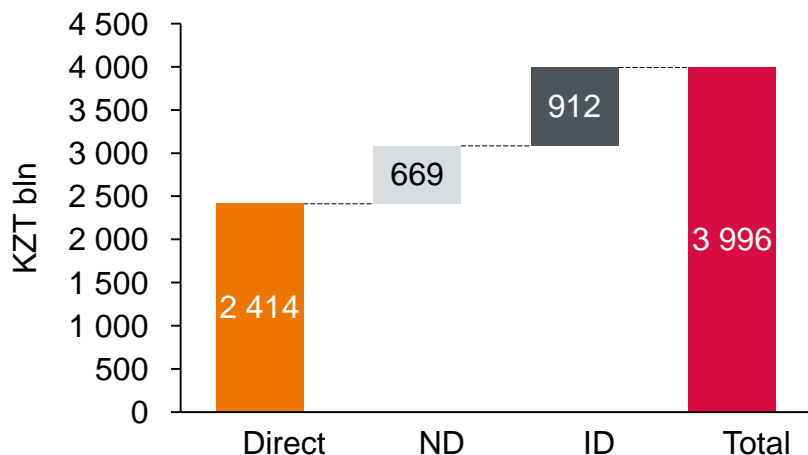
An aerial photograph of a vast desert canyon, likely the Grand Canyon, showing a winding river and a person in the foreground. The image is overlaid with a semi-transparent orange filter. A vertical white line is positioned to the left of the text.

**Contribution to the output**

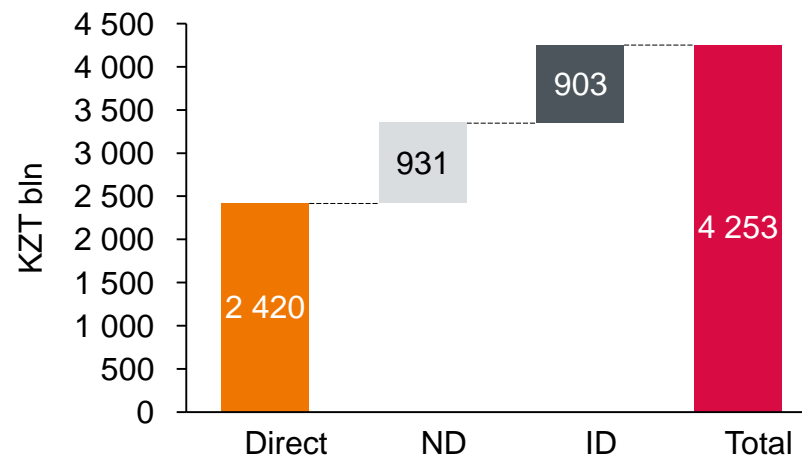
# The total contribution to the output of goods and services in Kazakhstan in 2022 amounted to KZT 4.3 trillion



Structure of ERG's total contribution to the output in 2021



Structure of ERG's total contribution to the output in 2022



## Full Contribution Multipliers

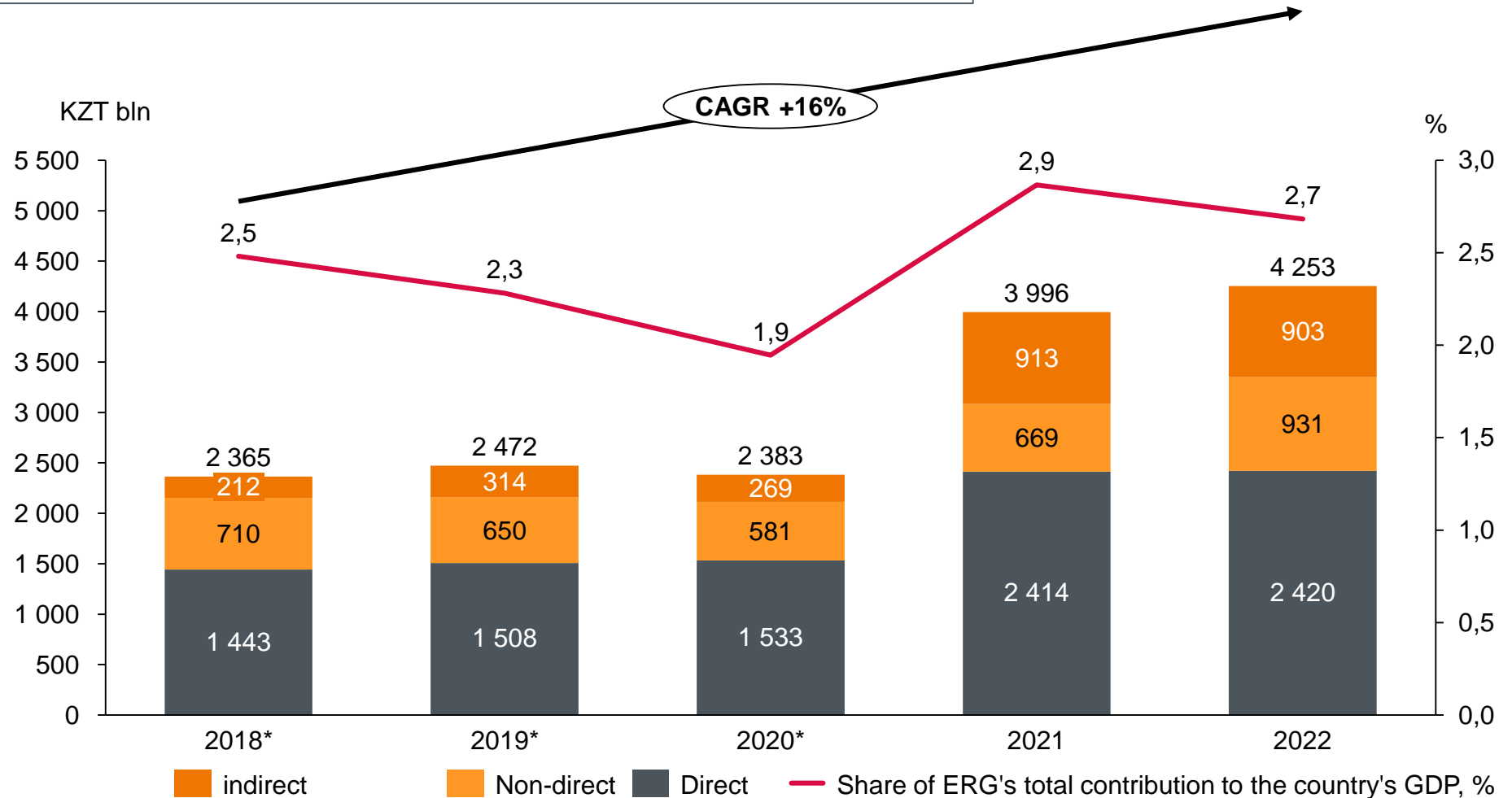
2018	1,64
2019	1,64
2020	1,55
2021	1,66
2022	1,76

- » For 100 tenge of ERG output, the country's economy creates an additional 76 tenge of output in other sectors of the economy in 2022.
- » ERG's total contribution to the output of goods and services is almost 3% of the country's total output in 2022.
- » ERG enterprises account for about 30% of all output in Pavlodar region in 2022.
- » One employed person in Kostanay region accounts for 12 mln tenge of the region's output, while one ERG employee in Kostanay region accounts for 24 mln tenge of ERG output.

# The annual average increase in ERG's total contribution to output was 16% over the period of 2018-2022.



Dynamics of ERG's output contribution for 2018-2022



\* The total contribution values have changed due to the recalculation of the direct contribution

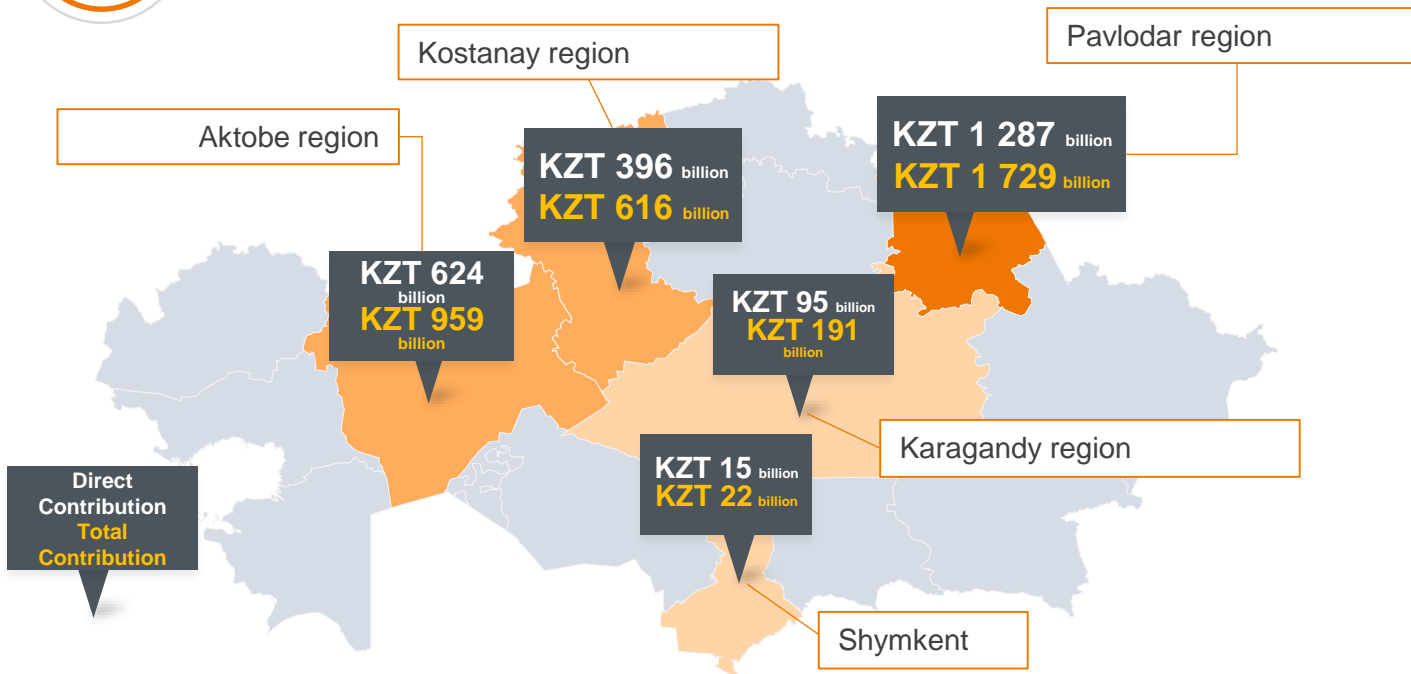


# Regional breakdown of total contribution to output, 2022

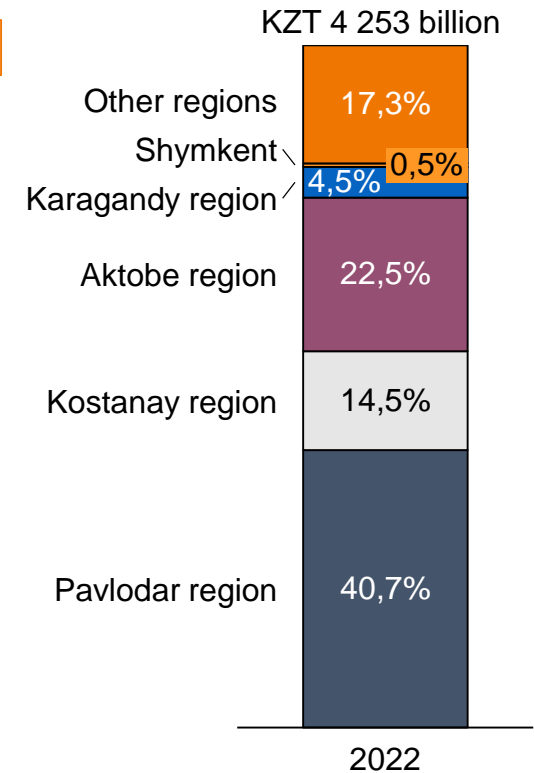


**KZT 4 253 billion**

ERG's total contribution to Kazakhstan's 2022 output



Structure of the total contribution to output by region for 2022



ERG's total contribution to the GRP of key regions where it operates in Kazakhstan in 2022



ERG's regional output contribution of Kazakhstan's regions in 2022 was

- 29,7% Pavlodar region
- 15,7% Aktobe region
- 11,2% Kostanay region
- 1,5% Karagandy region
- 0,6% Shymkent

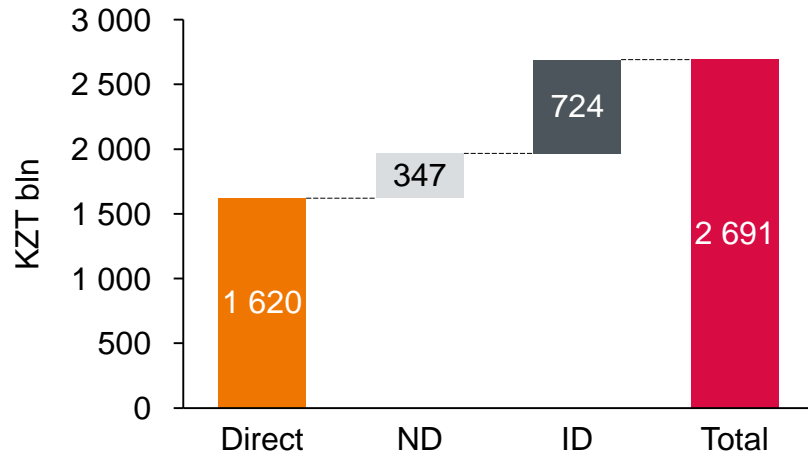
An aerial photograph of a vast, arid desert landscape. The terrain is characterized by numerous winding, light-colored paths or tracks that snake across the dark, sandy ground. In the lower right quadrant, a small, simple structure or tent is visible. The horizon is flat, and the sky is filled with soft, wispy clouds. The entire image has a warm, orange-brown color cast.

# **Contribution to the added value in Kazakhstan**

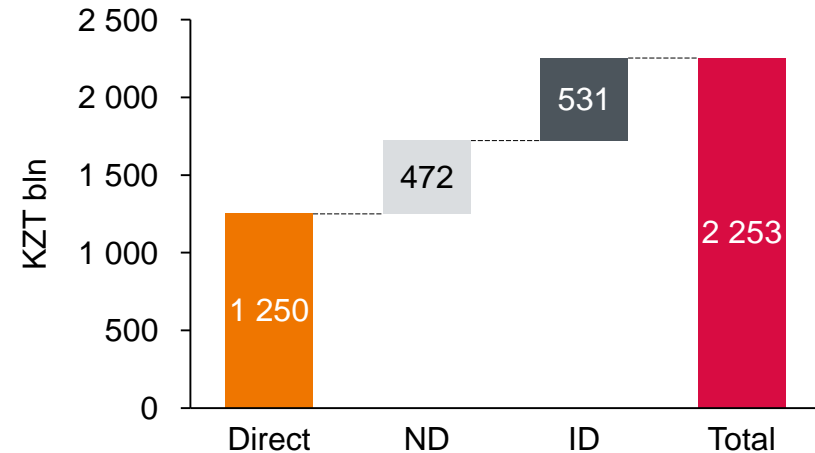
# The total contribution to the output of goods and services in Kazakhstan in 2022 amounted to KZT 2.3 trillion



Structure of ERG's total contribution to the GDP in 2021



Structure of ERG's total contribution to the GDP in 2022

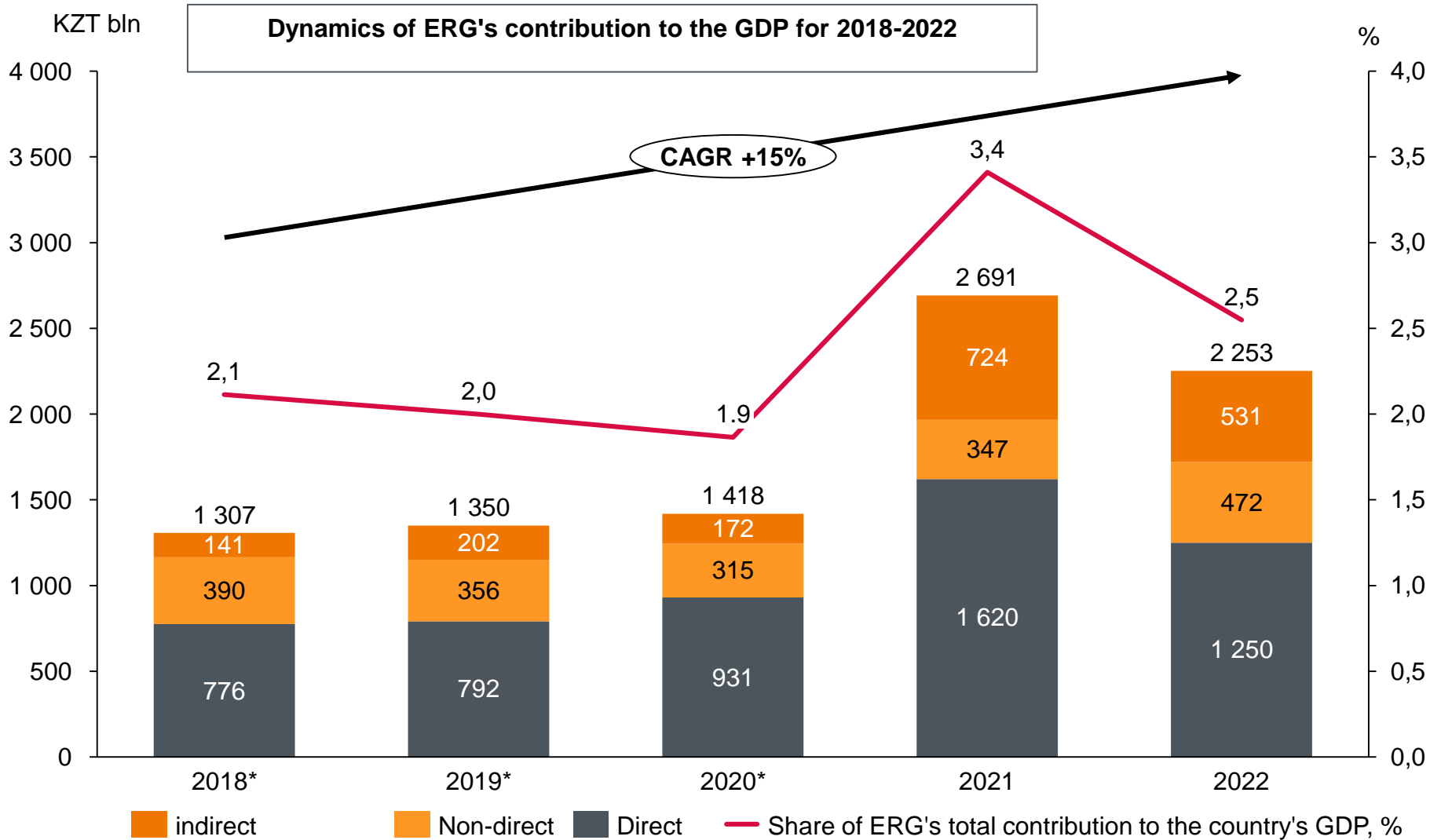


## Full Contribution Multipliers

2018	1,68
2019	1,71
2020	1,52
2021	1,66
2022	1,8

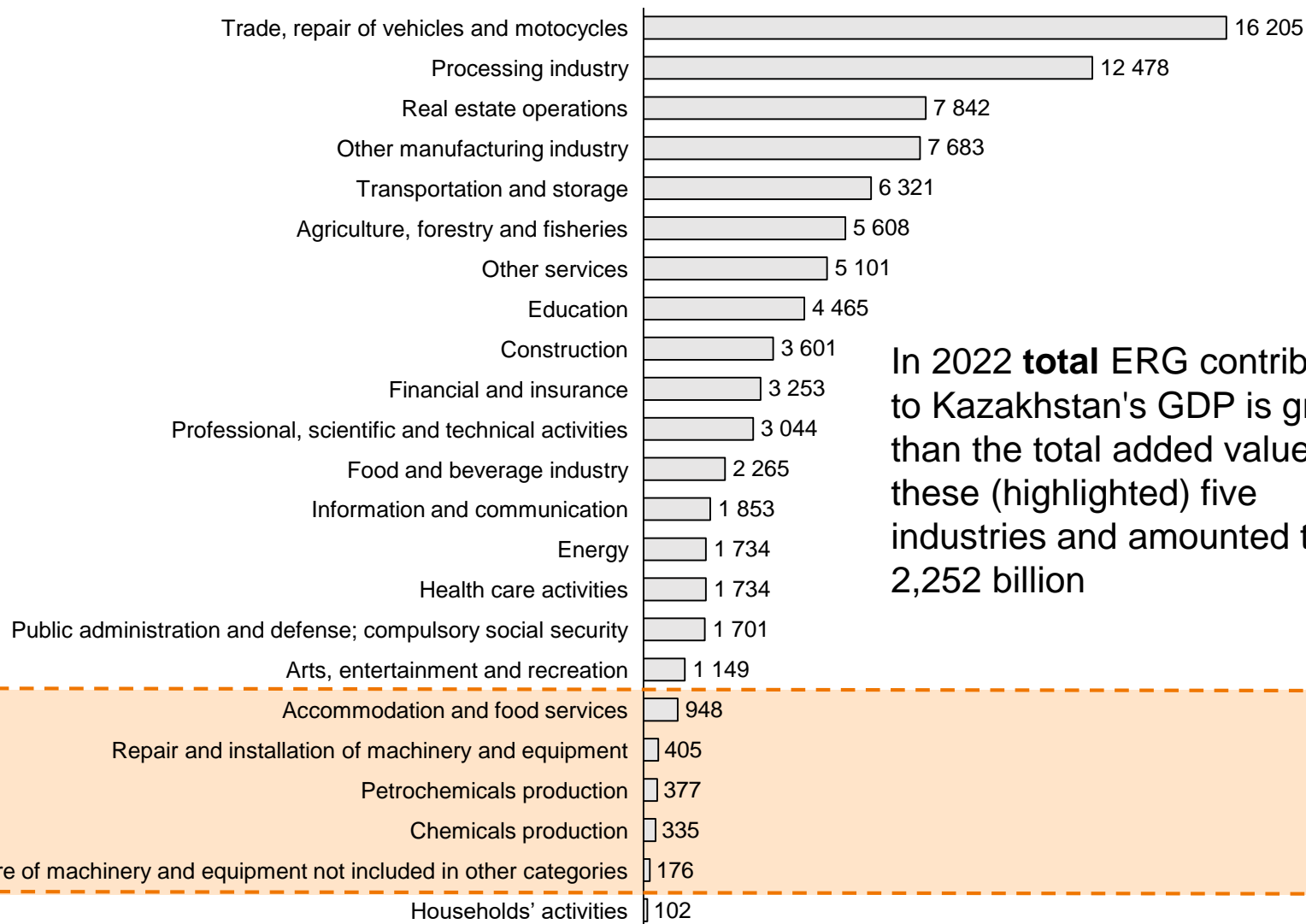
- » For 100 tenge of ERG output, the country's economy creates an additional 80 tenge of output in other sectors of the economy in 2022.
- » ERG's total contribution to added value fell in 2022 due to increased procurements.
- » In 2022, ERG's total contribution to Kazakhstan's added value is almost equivalent to the added value created by the food and beverage industry.
- » ERG's total contribution to Pavlodar region amounted to 1 trillion tenge, which is approximately 27% of the region's total GDP.

# The share of ERG's total contribution to the country's GDP is about 2.5%



\* The total contribution values have changed due to the recalculation of the direct contribution

# ERG's total contribution to GDP is greater than the total added value of 5 sectors of the economy

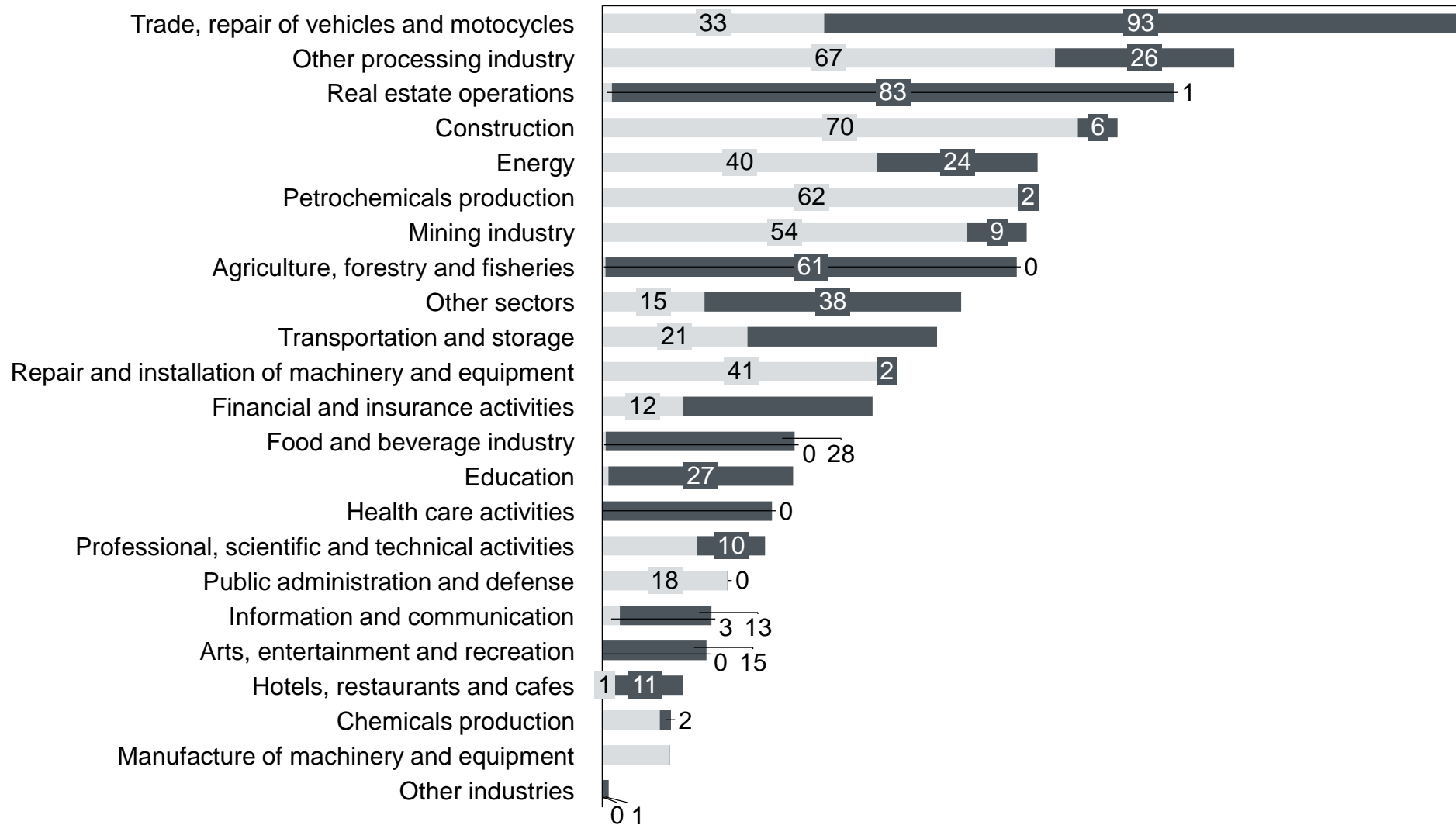


In 2022 **total** ERG contribution to Kazakhstan's GDP is greater than the total added value of these (highlighted) five industries and amounted to KZT 2,252 billion

# Sectoral breakdown of indirect and mediated contributions to GDP in 2022, billion KZT



Billion KZT



\* - Manufacture of machinery and equipment not included in other categories

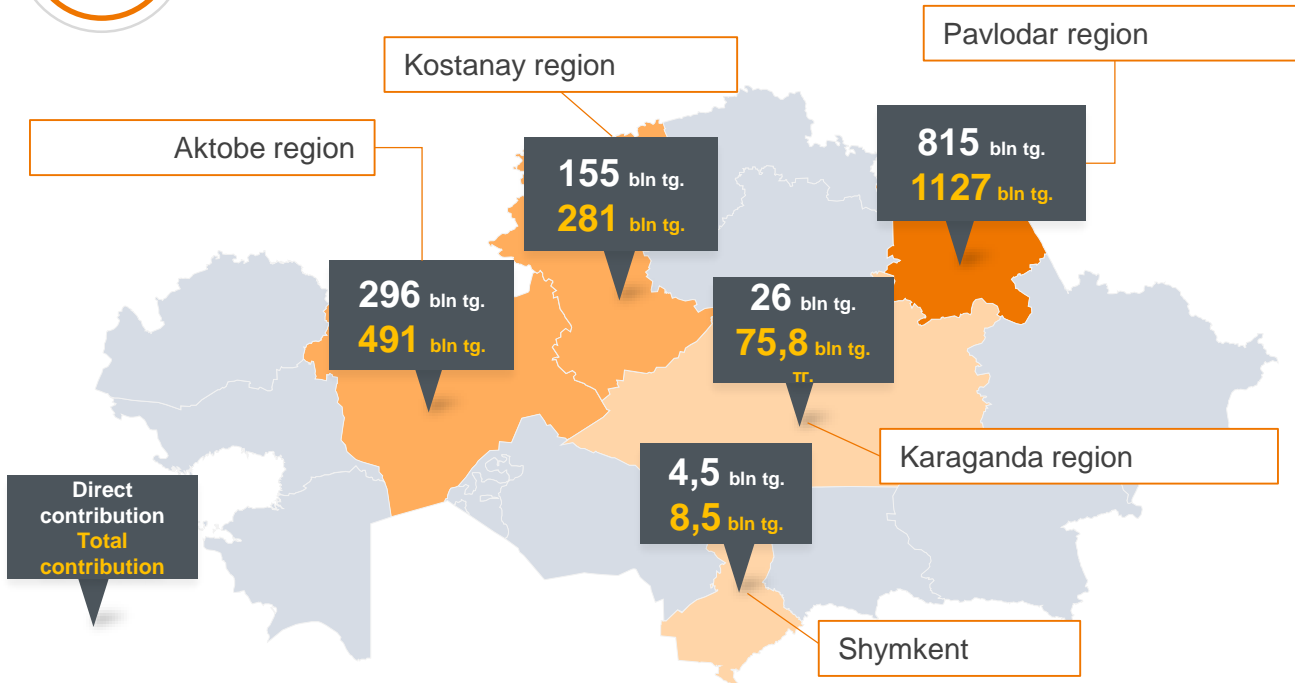
Indirect contribution Mediated contribution

# Regional breakdown of total contribution to GDP in 2022



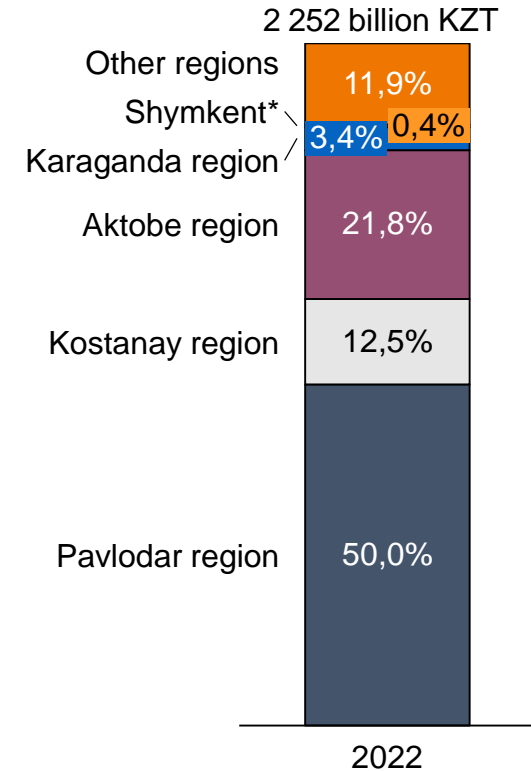
**2 252** billion KZT

Total ERG contribution to Kazakhstan's GDP for 2022.



Total ERG contribution to GRP of key regions of the Group's presence in Kazakhstan in 2022

Structure of total contribution to GDP by regions for 2022.



The regional contribution of ERG to the GRP of the regions of Kazakhstan in 2022 was:



- 27% Pavlodar region
- 11,4% Aktobe region
- 6,8% Kostanay region
- 0,8% Karaganda region
- 0,3% Shymkent

An aerial photograph of a vast desert canyon with a winding river, overlaid with a semi-transparent orange gradient. A white text box is centered on the image, containing the text "Contribution to employment generation".

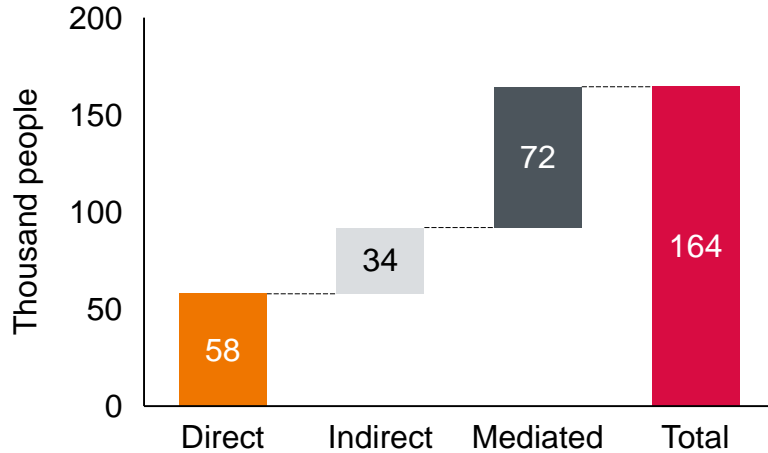
**Contribution to  
employment generation**



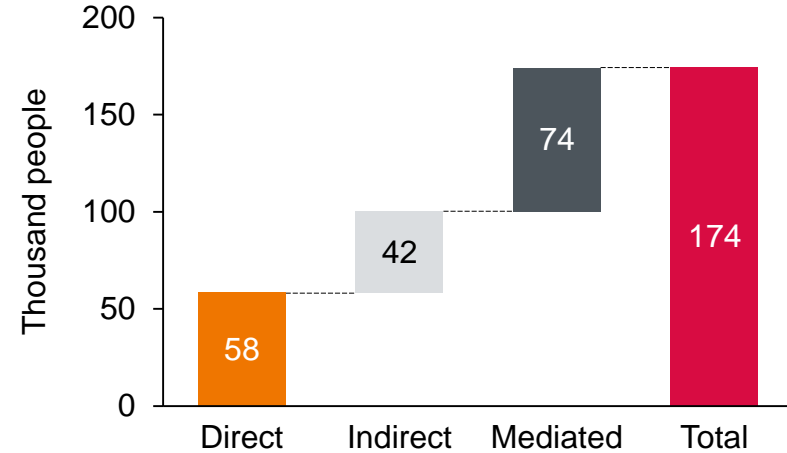
# The total ERG contribution to employment in 2022 was 174 thousand people



Total ERG contribution structure to employment in 2021



Total ERG contribution structure to employment in 2022



## Total contribution multipliers

2018	2,53
2019	2,64
2020	2,38
2021	2,83
2022	2,99

- » For every 100 people employed by ERG additional 200 jobs were created in other sectors of the national economy in 2022.
- » ERG's total contribution was 2% of the level of national employment in 2022.
- » The significant increase in ERG's total contribution to national employment compared to 2020 is due to the increase in ERG's payroll and output.

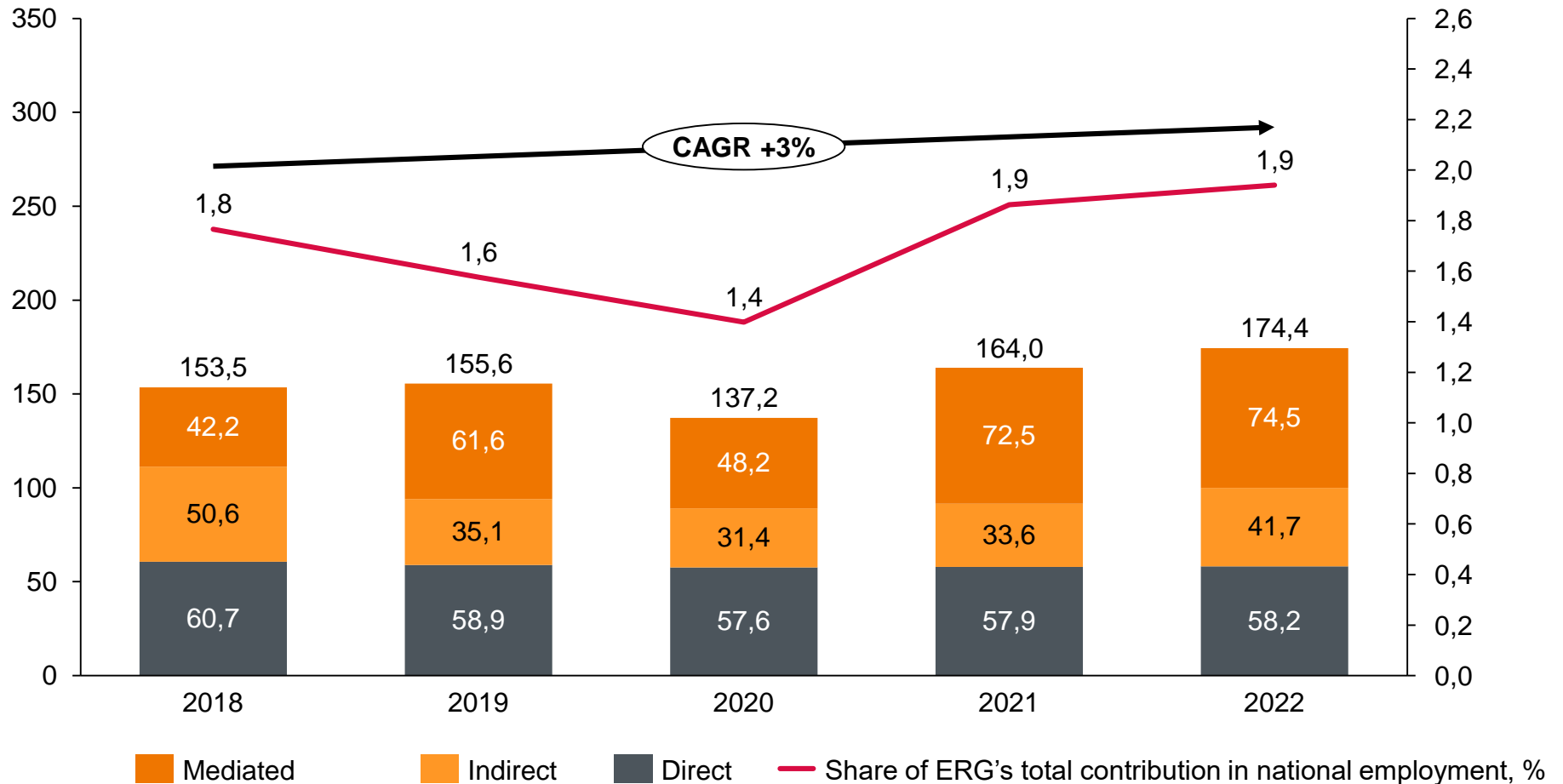
# The share of ERG's total contribution in national employment is about 1,9%



**Dynamics of ERG's contribution to employment in 2018-2022**

Thousand people

%

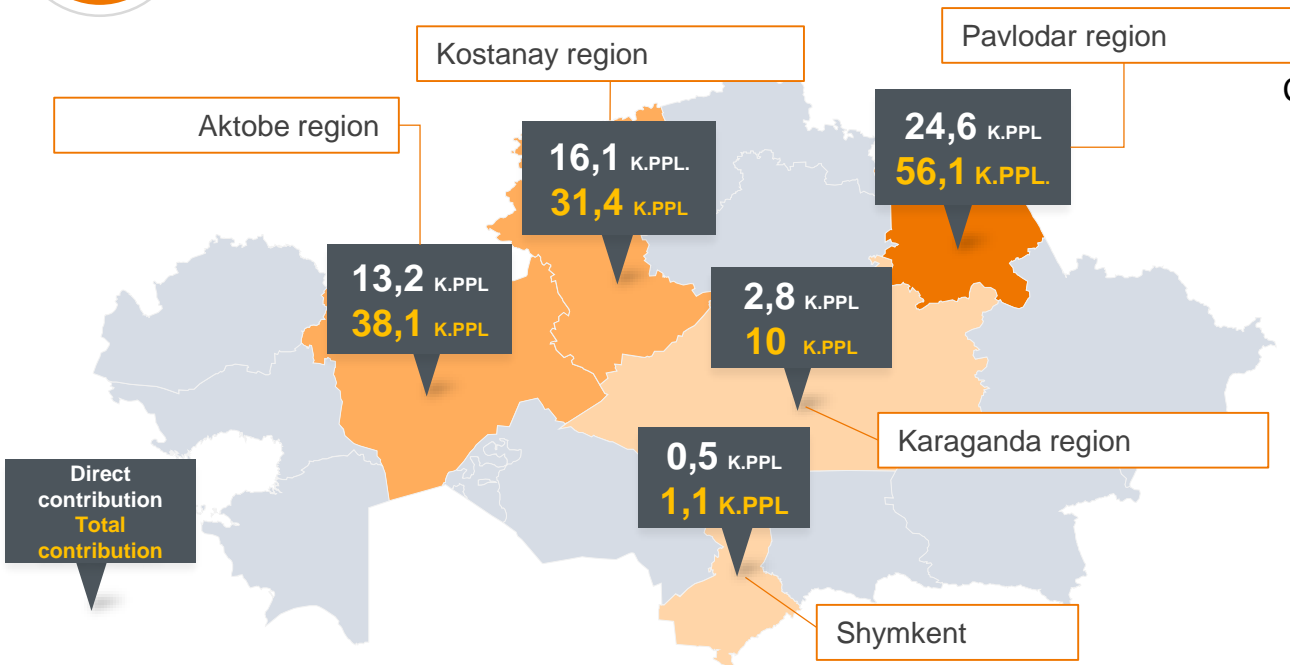


# Regional breakdown of total contribution to employment, 2022



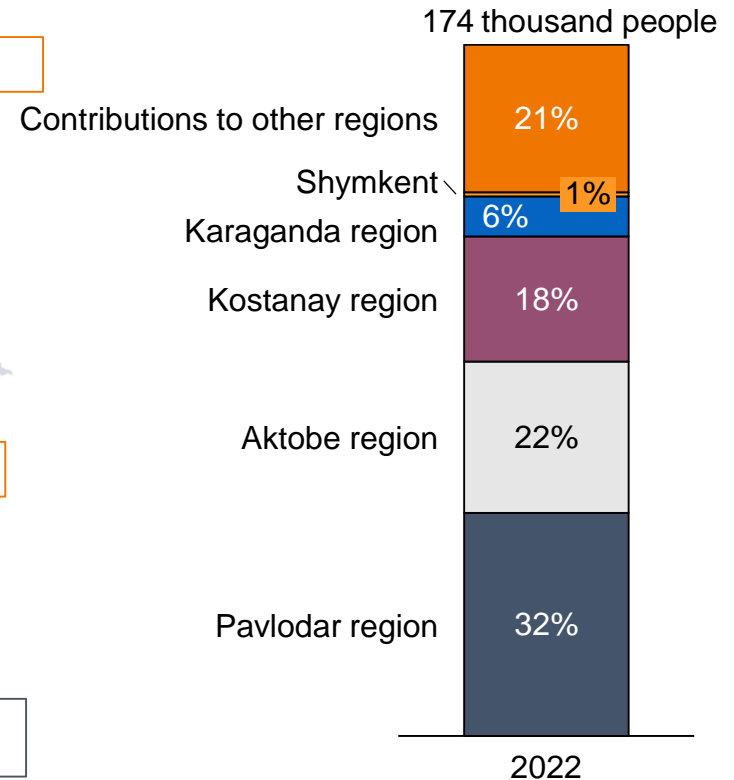
**174** тыс. человек

Полный вклад ERG в занятость Казахстана за 2022 г.



ERG's total contribution to employment in key regions of the company's presence in Kazakhstan in 2022

Structure of total contribution to employment by regions in 2022



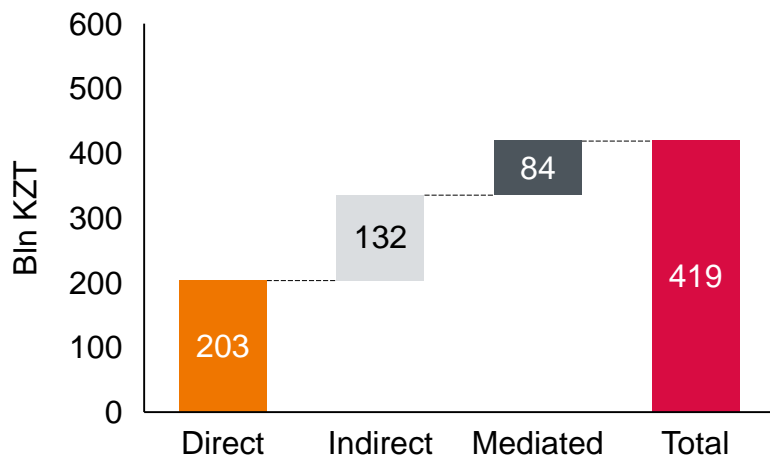
The regional contribution of ERG to the employment of the regions of Kazakhstan in 2022 was:

- 14,6% Pavlodar region
- 9,0% Aktobe region
- 6,9% Kostanay region
- 1,6% Karaganda region
- 0,3% Shymkent

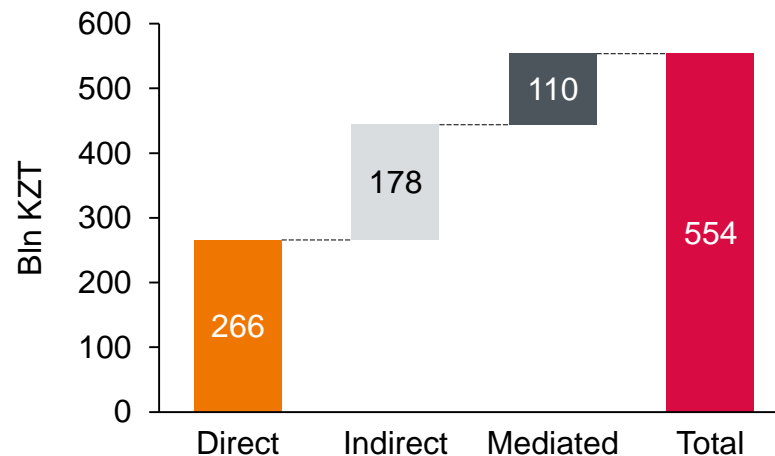
An aerial photograph of a desert canyon, showing winding paths and a river. The image is overlaid with a semi-transparent orange gradient. The text "Contribution to income of population" is centered in white, bold font, with a vertical white line to its left.

# Contribution to income of population

Structure of total ERG contribution to national labor income in 2021



Structure of total ERG contribution to national labor income in 2022

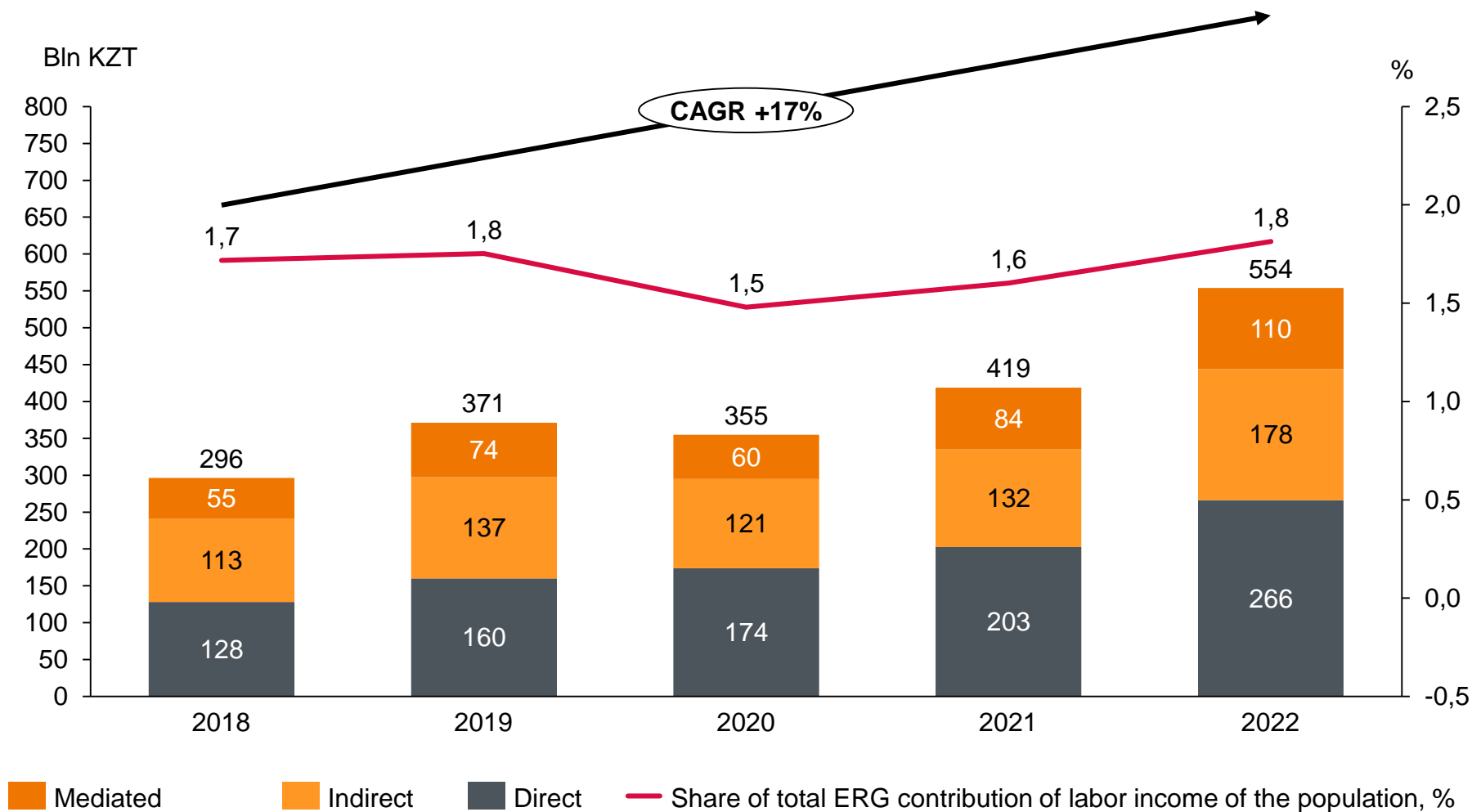


## Total contribution multipliers

2018	2,32
2019	2,32
2020	2,04
2021	2,06
2022	2,09

- » For every 100 KZT of ERG contribution to labor income of the population in the country's economy, an additional 109 KZT is created in other sectors of the economy in 2022.
- » The share of ERG's total contribution to the labor income of the population of Aktobe region was 10%, along with the share of ERG's total contribution to the labor income of the population of the country was almost 2%
- » The average annual growth of ERG's total contribution to labor income of the population was 17% for the period from 2018-2022.

Dynamics of ERG contribution to labor income for 2018-2022

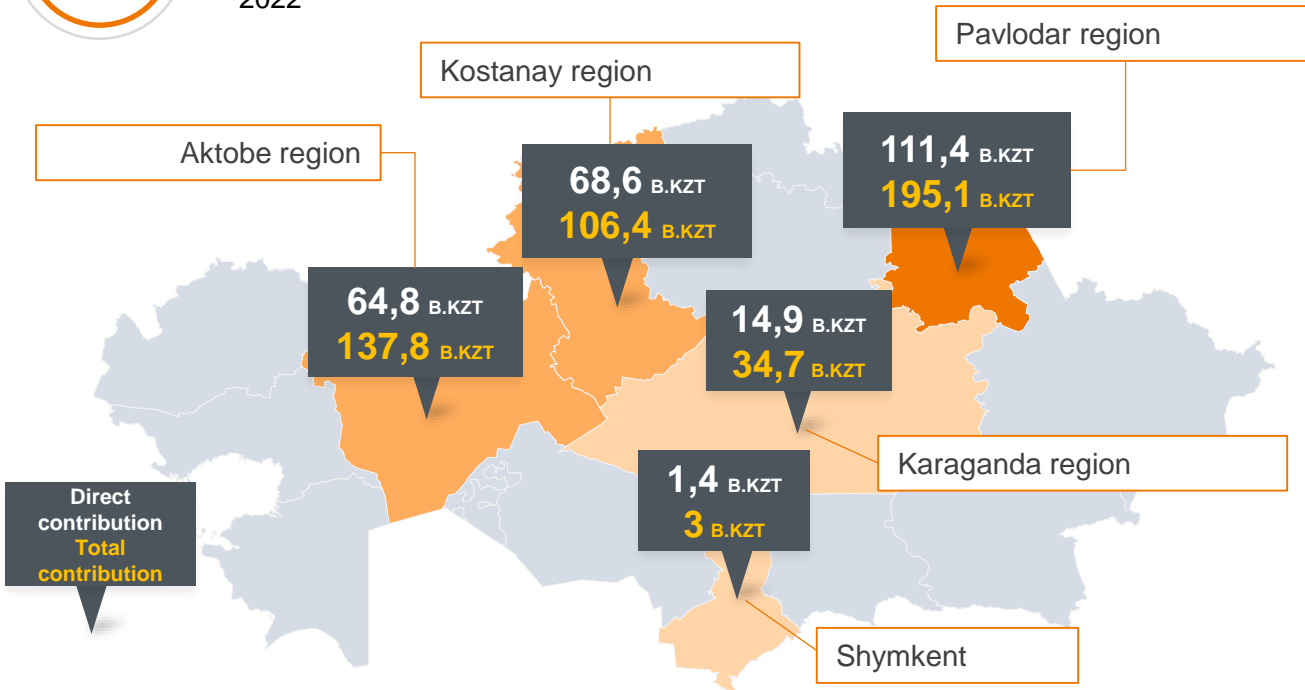


# ERG's regional contribution to the payroll in 2022

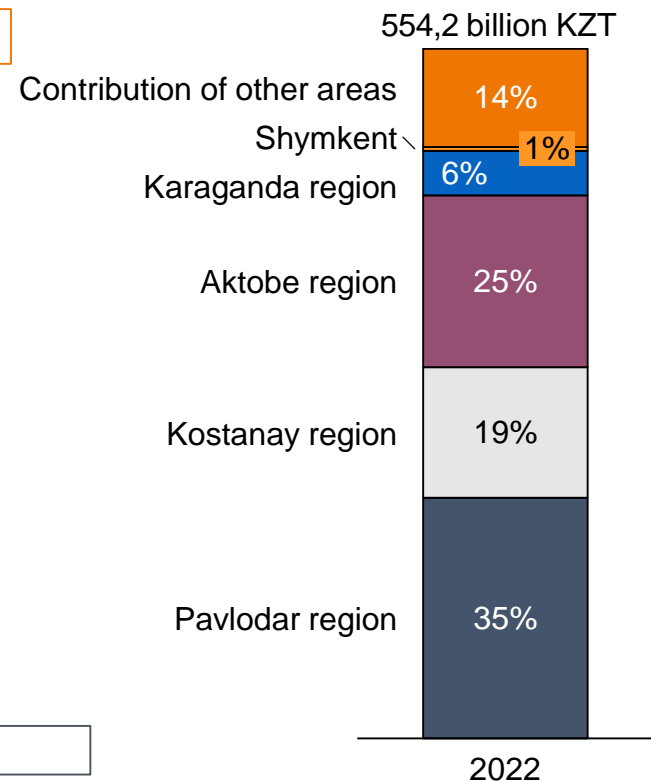


**554,2** billion KZT

Total ERG contribution to Kazakhstan's national labor income in 2022



Structure of total contribution to nation labor income in 2022



Total ERG contribution to the nation labor income of key regions of presence in Kazakhstan in 2022



The regional contribution of ERG to the labor income of the regions of Kazakhstan in 2022 was:

- 17% Pavlodar region
- 10,2% Aktobe region
- 8,8% Kostanay region
- 1,5% Karaganda region
- 0,3% Shymkent

An aerial photograph of a dry, eroded landscape, likely a desert or semi-arid region. The terrain is characterized by deep, winding gullies and paths that have formed due to water erosion. The color palette is dominated by warm, earthy tones of orange, brown, and tan. The sky is a pale, hazy blue with some light, wispy clouds. The overall scene conveys a sense of aridity and natural erosion.

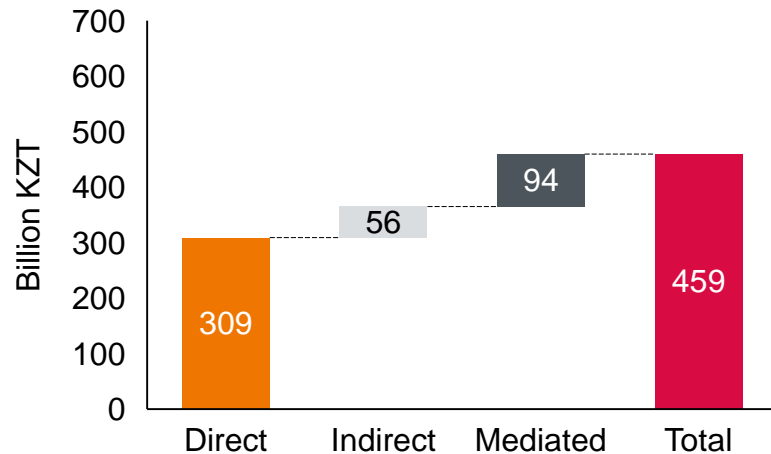
# **Contribution to state budgets**



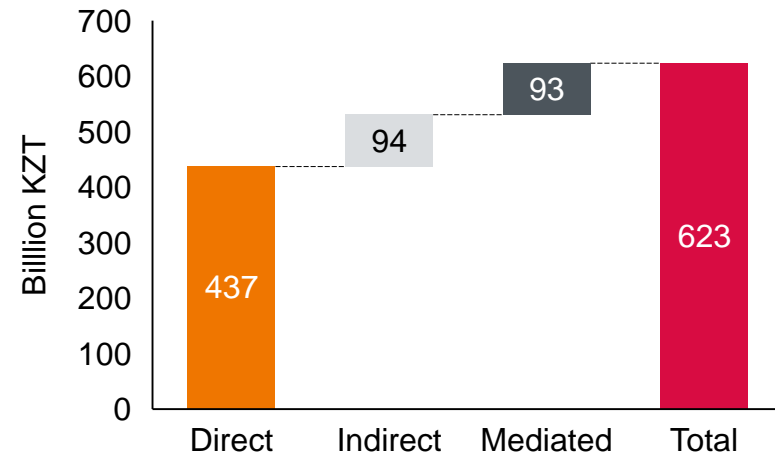
# ERG's total tax contribution in 2022 was 623B



Structure of ERG's total tax contribution in 2021



Structure of ERG's total tax contribution in 2022



## Total contribution multipliers

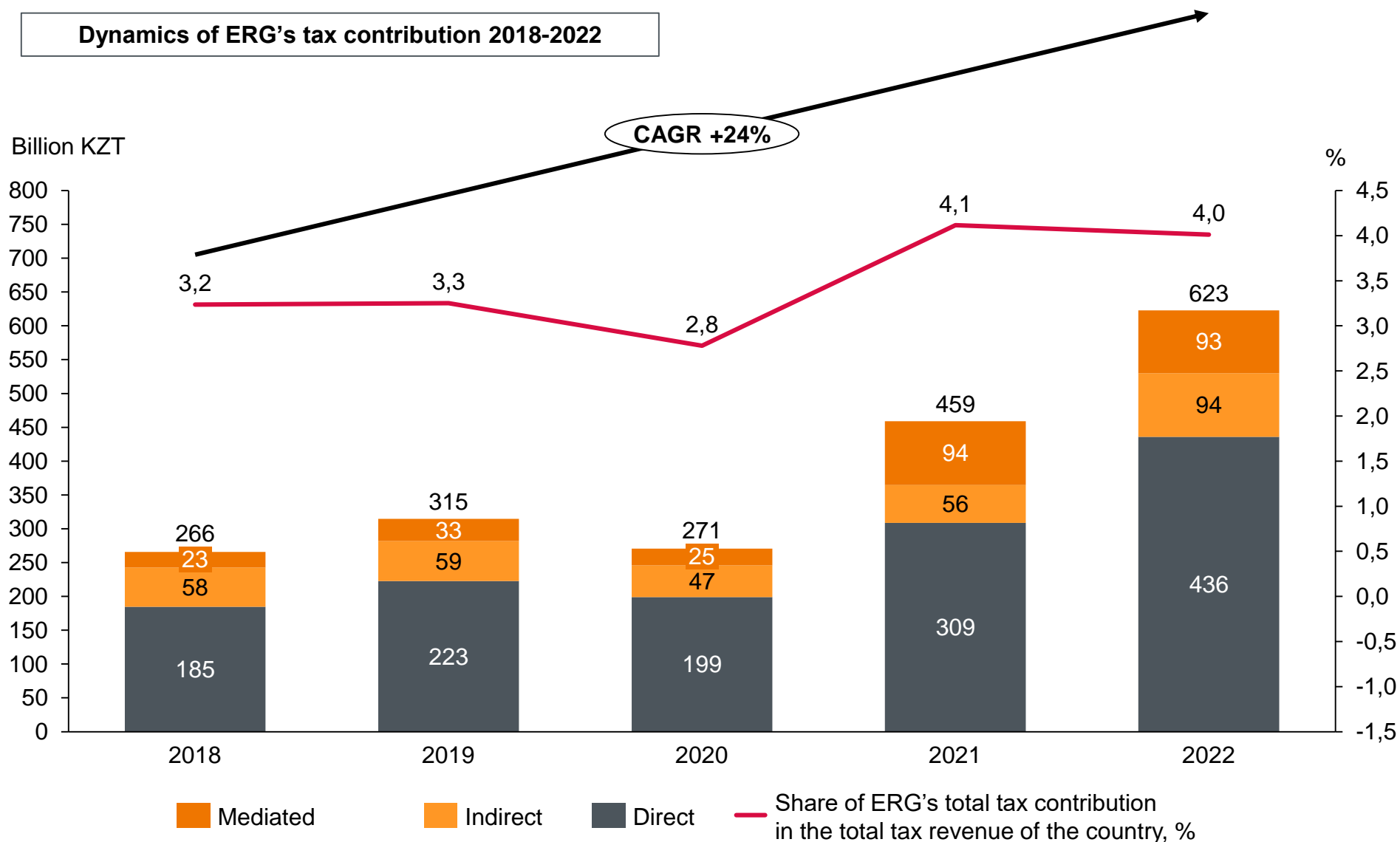
2018	1.44
2019	1.41
2020	1.36
2021	1.49
2022	1.43

- » For every 100 KZT of ERG's tax contribution to the country's economy an additional 43 KZT is created in other sectors of the economy in 2022.
- » The total tax contribution of ERG is 4% of all taxes and mandatory payments paid to the country's budget in 2022.
- » The direct tax contribution of ERG for 2022 exceeds the annual budget of Pavlodar region by 1.8 times.
- » The direct tax contribution of ERG for 2022 is almost equal to the output of the machinery and equipment manufacturing industry, not included in other categories.

# Share of ERG's total tax contribution was 4%



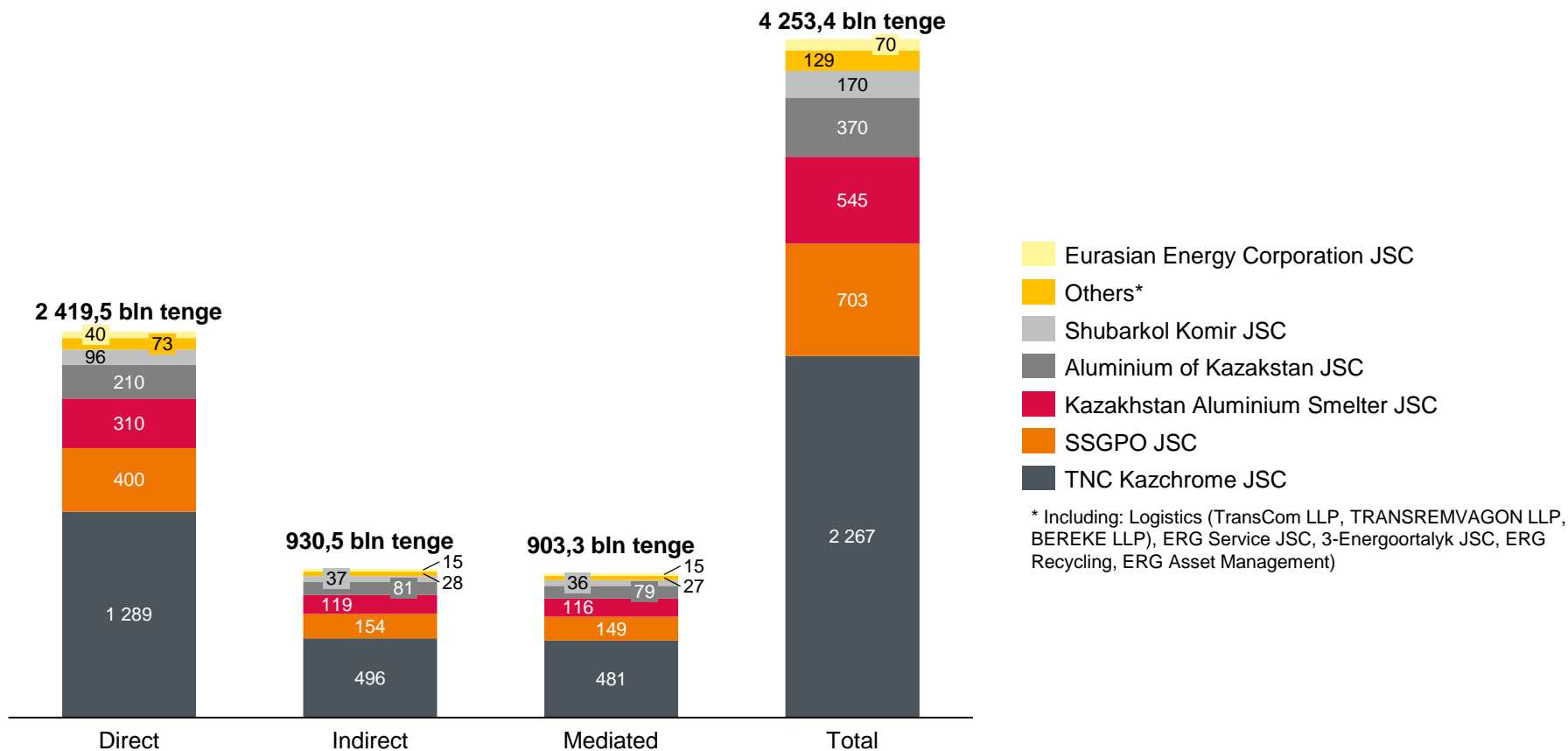
Dynamics of ERG's tax contribution 2018-2022



An aerial photograph of a vast, arid desert landscape. The terrain is characterized by deep, winding paths and a small, winding stream or road that cuts through the sandy, eroded hills. The sky is a pale, hazy blue with scattered, light clouds. The overall color palette is dominated by warm, earthy tones of orange, tan, and brown. A thin white vertical line is positioned to the left of the text.

**ERG Group's  
Contribution in Terms  
of Enterprises**

Structure of ERG contribution to output in terms of enterprises for 2022

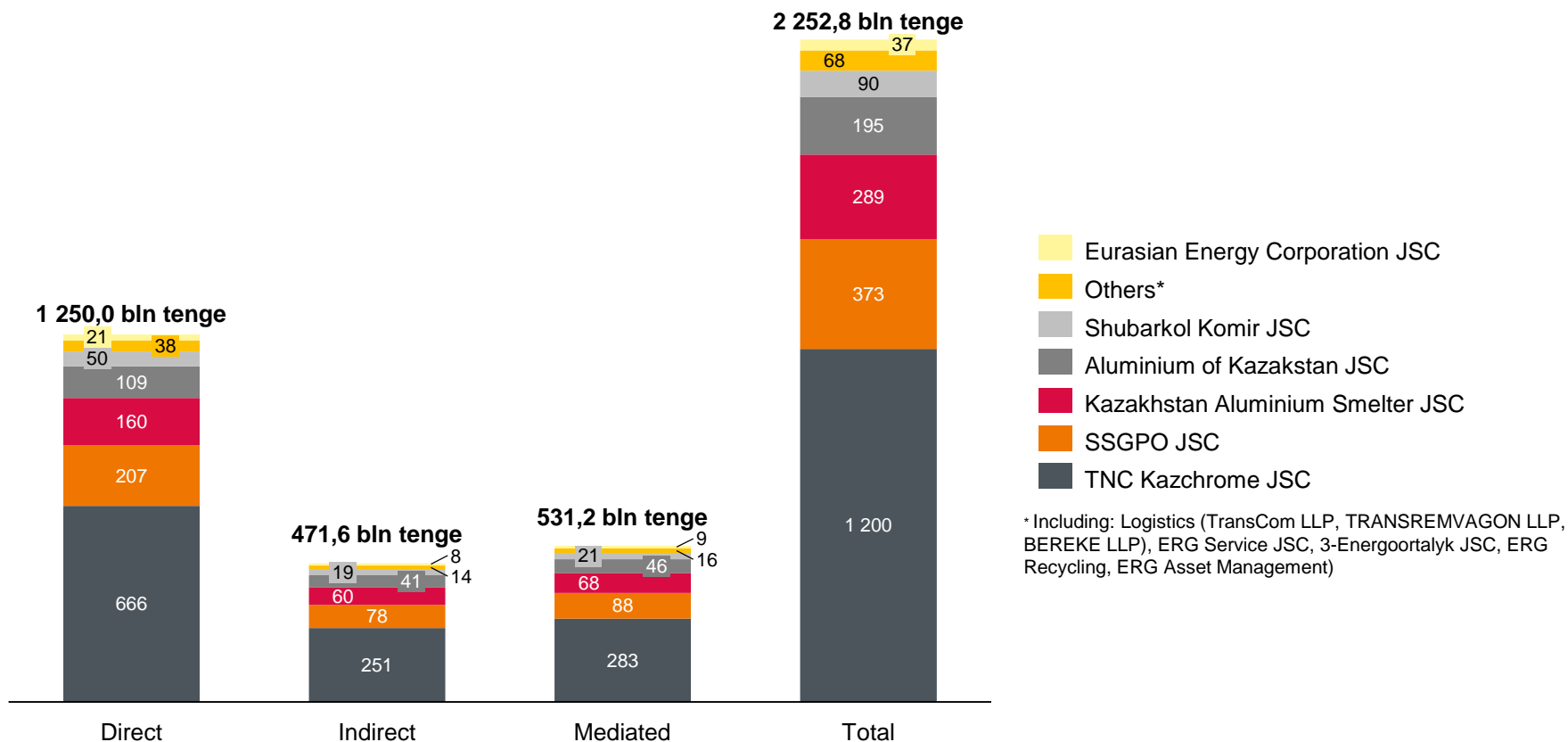


- » From 2021 to 2022, there were changes in the structure of the full contribution, namely the share of TNC Kazchrome JSC's contribution increased from 44% to 53%, while the share of SSGPO JSC's contribution almost halved (from 32% to 17%).
- » Changes in the shares of other assets' contributions varied within 3%.

# ERG Contribution to Value Added in Terms of Enterprise



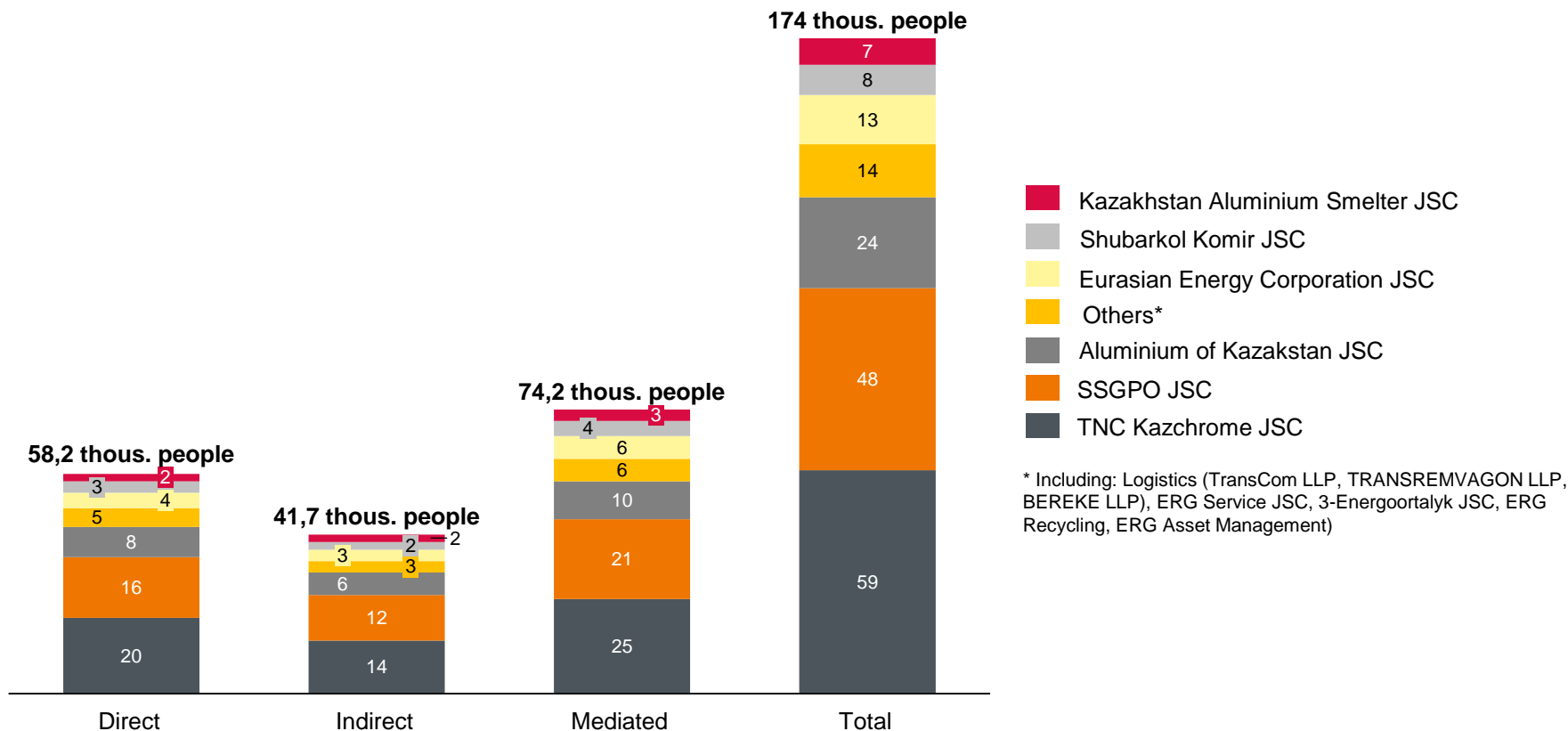
Structure of ERG's contribution to value added in terms of enterprises for 2022



\* Including: Logistics (TransCom LLP, TRANSREMVAGON LLP, BEREKE LLP), ERG Service JSC, 3-Energoortalyk JSC, ERG Recycling, ERG Asset Management)

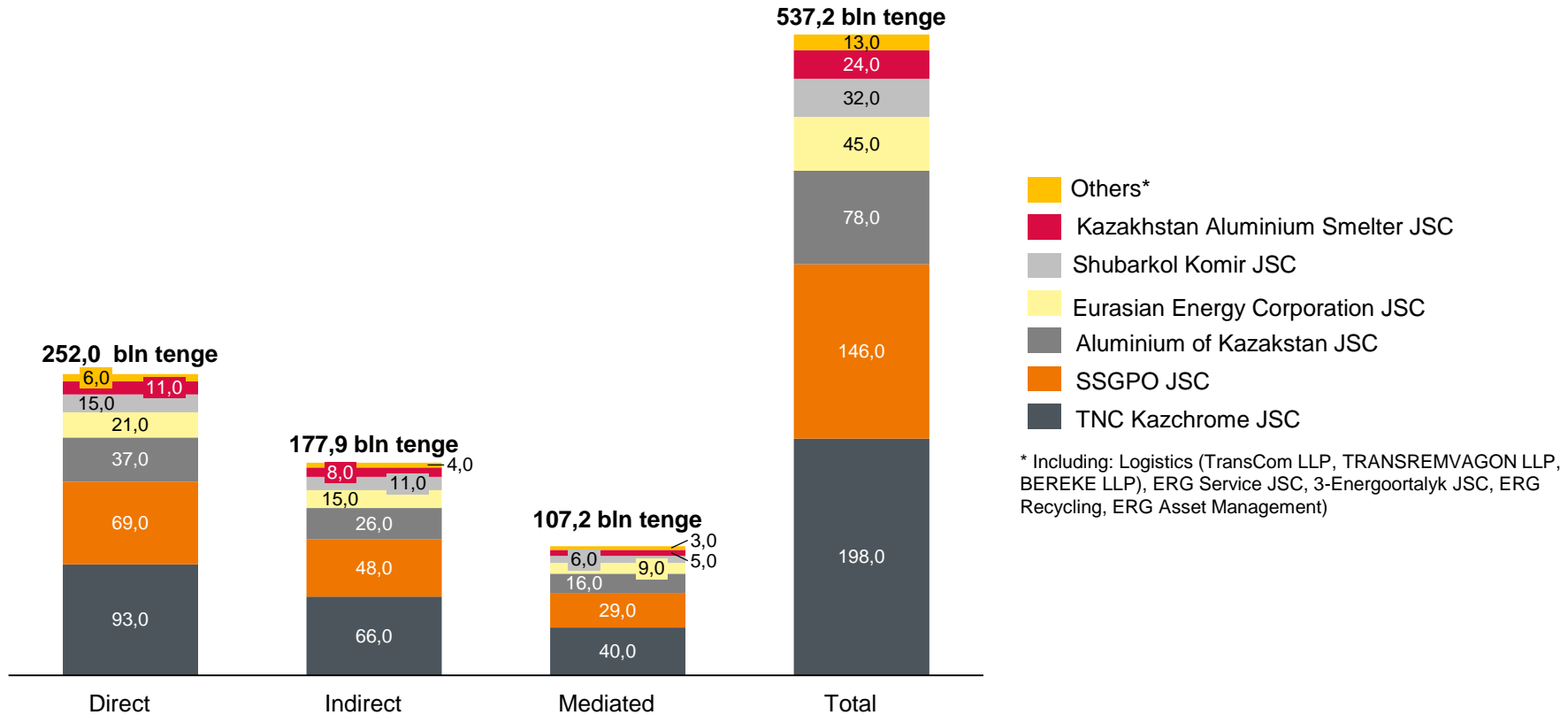
- » Similar to the output of goods and services, there were changes in the structure of full contribution to value added, namely an increase in the share of TNC Kazchrome JSC to 53% and a decrease in the share of SSGPO JSC's contribution to 17%.
- » Changes in the shares of other assets' contributions varied within 3%.

Structure of ERG contribution to employment in terms of enterprises for 2022



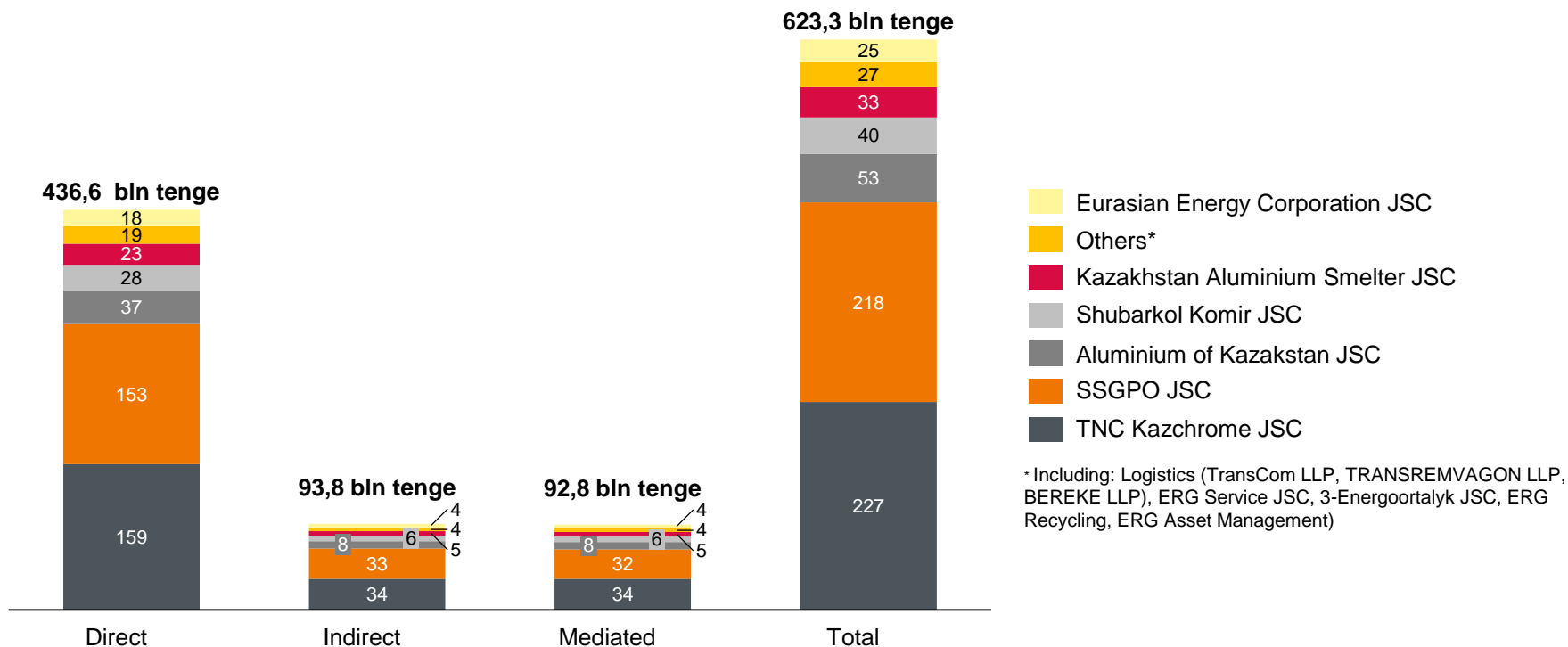
- » From 2021 to 2022, there were no significant changes in the composition of ERG's asset contribution to employment. The shares of ERG assets' contribution to employment varied within 2%.
- » The largest change in the contribution to employment was in SSGPO: from 2021 to 2022 the share of the asset's contribution to employment decreased from 30% to 28%.

Structure of ERG's contribution to household income in terms of enterprises for 2022



- » The largest change in the contribution to the provision of household income was for ERG Service JSC: from 2021 to 2022, the share of the asset's contribution decreased from 5% to 0.01%.
- » In addition, a significant increase in the share in the provision of household income was observed at TNC Kazchrome JSC: asset contribution increased from 33% to 37% by 2022.

Structure of ERG contribution to taxes in terms of enterprises for 2022



- » From 2021 to 2022, there were no significant changes in the structure of ERG's contribution to taxes by assets.
- » The shares of ERG assets' contribution to taxes varied within 2%.



An aerial photograph of a large-scale mining or construction site. The image shows extensive terraced earthworks, winding roads, and a central pond. The scene is dominated by shades of blue and grey, with a semi-transparent blue overlay. A vertical white line is positioned to the left of the text.

# Methodology and Key Assumptions of the Study

# How does ERG Contribute to the Social and Economic Development of the Country?



Contribution made directly by ERG in the course of production activities:

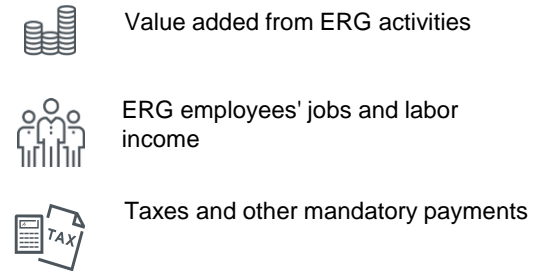
Economic benefits:

ERG's total contribution

## ERG's direct contribution



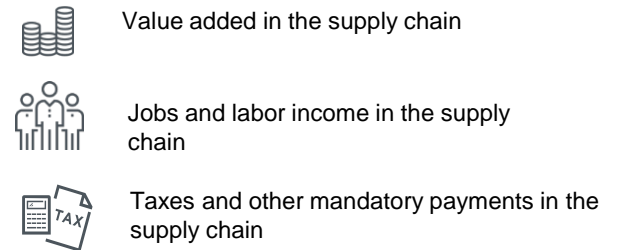
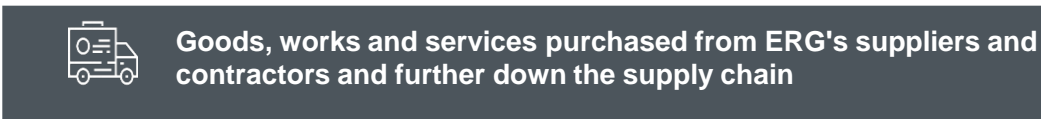
## ERG



ERG's contribution to other sectors of the economy through the purchase of goods and services:

## ERG's indirect contribution

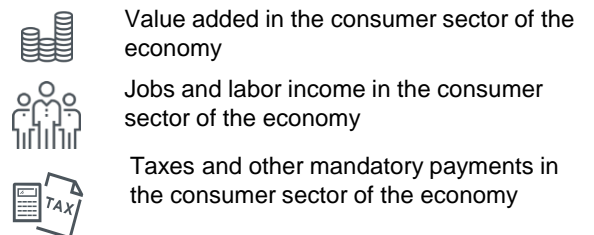
## ERG's suppliers and contractors



Contribution created by the consumption expenditures of ERG employees as well as "indirect" employees:

## ERG's mediated contribution

## ERG employees and "indirect" employees





Accounting data on ERG's operating and financial activities for 2021-2022, official data from the RK Statistics Committee, RK State Revenue Committee, the Unified Pension Savings Fund, as well as publicly available data from analytical and business publications served as inputs into modeling.



Modeling is based on the Input-Output model, developed by V. Leontiev, a Nobel Prize laureate, and on a number of macroeconomic indicators of the Republic of Kazakhstan, adopted by the governments and statistical authorities of many developed countries of the world.

The modeling result is ERG's total social and economic contribution measured across 5 indicators (contribution to GDP, output, employment, payroll and government revenues) and three components of the contribution (direct, indirect and mediated effects) and calculated in monetary terms.



## Assumptions and Constraints in Modeling



- » The Input-Output table for 2021 was used to calculate the contribution results for 2022, as the table for 2022 will not be available until late 2023. However, all input data required for the model, such as GDP, number of employed persons, labor income, amounts of taxes and payments paid for the period, etc. were taken from official sources for 2022.
- » The total output of the country for 2022 was obtained computationally based on the average annual output growth rate since 2013.
- » Since the effect on Kazakhstan's economy is created only by goods and services produced and/or purchased domestically, all data on purchases of goods and services of imported origin were excluded from the calculation when estimating the contribution.
- » For purchases from local suppliers engaged in resale of foreign products, only their share of trade margin of 20% was taken into account. This category of purchases was attributed to the trade industry.
- » Given the peculiarities of ERG's production process, the direct contribution data were classified by the Group's key business activities, for each of which the total contribution was then calculated (commodity mining and processing industries according to Common Classifier of Economic Activity of the RoK).
- » ERG Group payroll is shown without employer taxes (gross).



The full social and economic contribution of ERG to the regions of operation was calculated for four key regions of ERG's presence - Pavlodar, Kostanai, Aktobe and Karaganda regions, as well as the city of Shymkent for 2021-2022.

To assess the regional contribution, the national input-output table was divided into a number of regional tables. The approach to regionalization of input-output tables is based on the international methodology, which implies the application of coefficients characterizing interregional and intersectoral links, as well as the balance of flows of goods and services between regions of the country<sup>[1]</sup>.

## Assumptions and limitations in modeling



» Input-output tables for the regions for 2019 were obtained by calculation. To estimate the 2020 contribution - similar to the national contribution, the tables for 2019 were used.

» The output indicator by industry was obtained by calculation using the formula:

$$\text{Output} = (\text{industry purchases}) + (\text{value added})$$

» For the ERG direct regional contribution, only those enterprises located in the region of study were taken into account. Intra-group transactions between enterprises were also taken into account, except for transactions between enterprises within the same region.

» Transactions between companies that are located in different regions but belong to the same enterprise were not included in the calculations. For example, transactions between Aksu FP and DGOK, which are part of Kazchrome, were not included as purchases for Pavlodar region and output for Aktobe region.

» Assessment of the full tax contribution at the regional level was not carried out, due to the unrepresentativeness of the results due to the peculiarities of the tax system in the Republic of Kazakhstan (most taxes and payments are paid to the republican budget).

» In order to comply with the comparability of calculations with historical results in assessing the contribution to Karaganda region in the collection of statistics data for 2022, the total figures for Karaganda and Ulytau regions were used.

[1] Cambridge University Press: Input-Output Analysis Foundations and Extensions, Second Edition, Ronald E. Miller and Peter D. Blair (2009)



The calculation of the contribution at the Group enterprise level was carried out as follows:

1. For each ERG Group Enterprise within the perimeter of the study, the percentage (%) of direct contribution to each analyzed indicator was calculated. For example: the total number of employees of the Group in 2021 amounted to 57,970 people, and Aluminum Kazakhstan JSC - 8,027, which is 13.8% of the total number or of the Group's direct contribution to employment.
2. The indirect and mediated contribution multipliers were applied to the obtained direct contribution figures at the level of each individual enterprise, thus the full contribution of each ERG Group Enterprise within the study perimeter was obtained.



## Assumptions and limitations in calculation

This approach used the assumption that the indirect and mediated contribution multipliers for each type of contribution (to output, to GVA, to employment, etc.) calculated at the Group level can be applied at the level of the individual enterprise.

The percentages for gross value added were derived from the figures for contribution to output.