European Bank

for Reconstruction and Development

EBRD GPA TC FACILITY – SUPPORT IN ACCESSION TO THE AGREEMENT ON GOVERNMENT PROCUREMENT OF THE WORLD TRADE ORGANIZATION.

BELARUS: PUBLIC PROCUREMENT REPORTING MODULE FOR THE NATIONAL EPROCUREMENT SYSTEM/S

Deliverable 4

Annex 2: The methodology for calculating key performance Indicators used in the public e-procurement monitoring and reporting module

December 2018

Property	Данные
Release date:	*12/12/2018*
Status:	*Final*
Version:	*V1.0*
Authors:	*Palamarchuk Dmytro, Soloviova Anna*
Reviewed by:	*EBRD*
Approved by:	

Version	Description	Date
1.0	*Annex 2 – The methodology for calculating key performance Indicators used in the public procurement monitoring and reporting module.*	*12/12/2018*
2.0		
3.0		
4.0		
5.0		

DOCUMENT HISTORY 2
1 Document objectives 6
2 Data sources used for calculating the KPIs 6
3 Mathematical conventions used in formulas 7
4 Indicators 8
4.1 QUANTITATIVE INDICATORS 8
4.1.1 Number of procedures 8
4.1.2 Number of lots 8
4.1.3 Number of contracts 8
4.1.4 Number of contracting authorities 8
4.1.5 Number of bidders 9
4.1.6 Number of successfully concluded lots 9
4.1.7 Number of procuring entities 9
4.1.8 Number of suppliers 9
4.1.9 Number of winners 10
4.1.10 Number of enquires 10
4.1.11 Share of unanswered enquires 10
4.1.12 Number of lots for SME 11
4.1.13 Share of lots for SME 11
4.1.14 Number of re-announced procedures 11
4.1.15 Number of republished lots 11
4.1.16 Average number of republished lots for a procedure 12
4.1.17 Number of non-resident bidders 12
4.1.18 Average number of bidders per lot 12
4.1.19 Number of non-resident winners 13
4.1.20 Number of published protocols 13
4.1.21 Number of bids 13
4.1.22 Average number of bids in a lot 13
4.1.23 Average number of withdrawn bids in a lot 14
4.1.24 Average number of rejected bids in a lot 14
4.1.25 Share of rejected bids 14
4.1.26 Share of withdrawn bids 15
4.1.27 Average number of bids with the margin preference for a lot 15
4.1.28 Share of bids with the margin of preference for a lot 15
4.1.29 Share of winning bids with the margin of preference 16

4.1.30 Number of organizations 16
4.1.31 Number of budget organizations 16
4.1.32 Average number of contracts per supplier 17
4.1.33 Number of contract positions 17
4.1.34 Share of non-resident suppliers 17
4.1.35 Share of contracting authorities from the capital 18
4.1.36 Noncompetitive contracts number 18
4.1.37 Share of noncompetitive contracts by number of contracts 18
4.1.38 Number of contracts (SME suppliers) 18
4.1.39 Number of plans published 19
4.1.40 Number of plan items 19
4.1.41 Number of contracting authorities (who have published an annual plan) 19
4.2 COST INDICATORS 20
4.2.1 Lots value, BYN 20
4.2.2 Contracts positions value, BYN 20
4.2.3 Noncompetitive contracts positions value, BYN 20
4.2.4 Share of noncompetitive contracts by contracts positions value 20
4.2.5 Contracts positions value with non-resident suppliers, BYN 21
4.2.6 Share of imported products by contracts positions value, BYN 21
4.2.7 Planned value, BYN 21
4.3 TIME DURATION INDICATORS 22
4.3.1 Average procedure duration 22
4.3.2 Average enquiry and bidding period duration 22
4.3.3 Average awarding period duration 22
4.3.4 Average award publication period duration 23
4.3.5 Average time to answer enquiry 23
4.4 INDICATORS FOR ECC FORM 23
4.4.1 Row 01. Number of conducted public procurement procedures 23
4.4.2 Row 02. Number of procedures which do not lead to the conclusion of the contract 24
4.4.3 Row 03. Number of bids submitted by potential suppliers 24
4.4.4 Row 04. Georgia (number of bids submitted by potential suppliers) 24
4.4.5 Row 05. Belarus (number of bids submitted by potential suppliers) 24
4.4.6 Row 06. Kazakhstan (number of bids submitted by potential suppliers) 24
4.4.7 Row 07. Kyrgyzstan (number of bids submitted by potential suppliers) 24
4.4.8 Row 08. Russia (number of bids submitted by potential suppliers) 25
4.4.9 Row 09. Number of bids not admitted to become the winning ones 25

4.4.10 Row 10. Georgia (Number of bids not admitted to become the winning ones)..... 25
4.4.11 Row 11. Belarus (Number of bids not admitted to become the winning ones) 25
4.4.12 Row 12. Kazakhstan (Number of bids not admitted to become the winning ones) 25
4.4.13 Row 13. Kyrgyzstan (Number of bids not admitted to become the winning ones). 26
4.4.14 Row 14. Russia (Number of bids not admitted to become the winning ones) 26
4.4.15 Row 15. Number of withdrawn bids 26
4.4.16 Row 16. Georgia (number of withdrawn bids) 26
4.4.17 Row 17. Belarus (number of withdrawn bids) 26
4.4.18 Row 18. Kazakhstan (number of withdrawn bids) 27
4.4.19 Row 19. Kyrgyzstan (number of withdrawn bids) 27
4.4.20 Row 20. Russia (number of withdrawn bids) 27
4.4.21 Row 21. Number of suppliers..... 27
4.4.22 Row 22. Georgia (number of suppliers)..... 27
4.4.23 Row 23. Belarus (number of suppliers) 27
4.4.24 Row 24. Kazakhstan (number of suppliers)..... 28
4.4.25 Row 25. Kyrgyzstan (number of suppliers)..... 28
4.4.26 Row 26. Russia (number of suppliers)..... 28
4.4.27 Row 27. Contracts value..... 28
4.4.28 Row 28. Georgia (contracts value) 28
4.4.29 Row 29. Belarus (contracts value)..... 28
4.4.30 Row 30. Kazakhstan (contracts value) 28
4.4.31 Row 31. Kyrgyzstan (contracts value) 29
4.4.32 Row 32. Russia (contracts value) 29
4.4.33 Row 33. Contracts value (with product from Georgia) 29
4.4.34 Row 34. Contracts value (with product from Belarus) 29
4.4.35 Row 35. Contracts value (with product from Kazakhstan) 29
4.4.36 Row 36. Contracts value (with product from Kyrgyzstan) 29
4.4.37 Row 37. Contracts value (with product from Russia) 30
4.4.38 Row 38. Contracts financed by budget..... 30
4.4.39 Row 39. Contracts non financed by budget..... 30
4.4.40 Row 40. Number of contract positions with goods 30
4.4.41 Row 41. Number of contract positions with works and services 30

1 Document objectives

This document has been prepared under contract number C38651/327/45390, dated 27 March 2018 between the European Bank for Reconstruction and Development and the consultant – DATA PATH ANALYTICS LLC, Kyiv, Ukraine.

This paper aims to present key performance indicators which evaluate public procurement processes in the Republic of Belarus and to introduce the methodology for calculating these indicators based on the OCDS data.

The provided information for each indicator is as follows:

1. Name;
2. Short description;
3. Calculating formula based on OCDS data.

All indicators presented in this document are divided into the following categories:

1. Quantitative indicators;
2. Cost indicators;
3. Time duration indicators;
4. Indicators for EEC forms.

2 Data sources used for calculating the KPIs

The Belarus open public procurement data which have been used for calculating key performance indicators can be accessible by the following links[1]:

1. http://212.98.171.10:8110/belarus/compiled-plannings - annual public procurement planning processes data (planning API);
2. http://212.98.171.10:8110/belarus/releases - public procurement tendering and contracting data (tendering API).

Moreover, APIs with catalogue information were developed:

1. http://212.98.171.10:8110/belarus/catalogs/okrb - Belarus common procurement vocabulary (Belarus Classification of Products by Economic Activities). Catalogue data source: icetrade database;
2. http://212.98.171.10:8110/belarus/catalogs/tender-industries - public procurement industries catalogue. Catalogue data source: icetrade database;

[1] *Links data is relevant on December 2018. These links may be modified by the system administrator later.*

3. http://212.98.171.10:8110/belarus/catalogs/establishments - establishments catalogue. Catalogue data source: icetrade database;
4. http://212.98.171.10:8110/belarus/catalogs/finance-sources – finance sources catalogue. Catalogue data source: icetrade database;
5. http://212.98.171.10:8110/belarus/catalogs/sme – small and medium-sized enterprises catalogue. Catalogue data source: icetrade database;
6. http://212.98.171.10:8110/belarus/catalogs/currency-rates – exchange rates data catalogue. Catalogue data source: http://www.nbrb.by/APIHelp/ExRates

Each link represents information according to public procurement plans, tenders and contracts. To calculate indicators, this is necessary to download all documents which describe public procurement processes using an access point.

Cost indicators are calculated considered with Belarus national currency. International currency values were converted to Belarusian rubles using exchange rates data catalogue.

3 Mathematical conventions used in formulas

A combination of JSONPath and SQL syntax has been used to introduce formulas. A list of key functions is presented below:

- **count** — analogue of **count** in SQL
- **avg** — analogue of **avg** in SQL
- **count_unique** — analogue of **count distinct** in SQL
- **sum** — analogue of **sum** in SQL
- **where** — analogue of **where** in SQL
- **exists** — operation indicates that any data item is present
- <> — operator “not equal”
- **and**, **or** — logical conjunction and disjunction
- **not** — logical negation
- **in** — analogue of **in** in SQL
- +, -, = — addition, subtraction, and equality operators
- **{название KPI}** — indicator value (applicable when one indicator is used to calculate another indicator as a variable)
- **incremental_count** – beginning from zero increment count

Each calculation formula is applicable to all KPIs through one application (except KPIs for EEC forms). Applications where formulas are used specified in KPIs description.

4 Indicators

4.1 QUANTITATIVE INDICATORS

4.1.1 Number of procedures

- Name: Number of procedures;
- Short description: the total number of procedures which have been placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
count($.tender.id)
```

4.1.2 Number of lots

- Name: Number of lots;
- Short description: the total number of lots which have been placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
count($.tender.lots[].id)
```

4.1.3 Number of contracts

- Name: Number of contracts;
- Short description: This indicator presents the number of public procurement contracts which have been placed on the electronic public procurement portal;
- Applications where used: procedures application, contracts application;
- Data source: tendering API;
- Formula:

```
count($.contracts[].id)
```

4.1.4 Number of contracting authorities

- Name: Number of contracting authorities;
- Short description: this indicator presents the number of organizations which have at least one signed contract for purchasing goods (services/works) placed on the electronic public procurement portal;
- Applications where used: procedures application, contracts application;

- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'buyer' **in** $.parties[].roles[]

4.1.5 Number of bidders

- Name: Number of bidders;
- Short description: this indicator presents the number of organizations which have participated in public procurement tenders by using the electronic public procurement portal at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'tenderer' **in** $.parties[].roles[]

4.1.6 Number of successfully concluded lots

- Name: Number of successfully concluded lots;
- Short description: this indicator presents the number of awarded lots;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of lots} where $.tender.lots[].status = 'complete'

4.1.7 Number of procuring entities

- Name: Number of procuring entities;
- Short description: this indicator presents the number of organizations which have placed a procedure on the public procurement portal at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'procuring entity' **in** $.parties[].roles[]

4.1.8 Number of suppliers

- Name: Number of suppliers;
- Short description: this indicator presents the number of organizations which have at least one signed contract for providing goods (services/works) placed on the electronic public procurement portal;
- Applications where used: procedures application, contracts application;

- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'supplier' **in** $.parties[].roles[]

4.1.9 Number of winners

- Name: Number of winners;
- Short description: this indicator presents the number of organizations which bids have been recognized (as a result of bids comparison and assessment) as the best ones at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'winner' **in** $.parties[].roles[]

4.1.10 Number of enquires

- Name: Number of enquires;
- Short description: this indicator presents the number of potential bidders enquires about procedures placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count($.tender.enquiries[].id)

4.1.11 Share of unanswered enquires

- Name: Share of unanswered enquires;
- Short description: this indicator presents a share of submitted enquires about procedures which have been left without respond placed on the electronic public procurement portal to all enquiries submitted by potential bidders on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of enquires} where not exists($.tender.enquiries[].answer)
/
{Number of enquires} * 100%

4.1.12 Number of lots for SME

- Name: Number of lots for SME;
- Short description: this indicator presents the number of lots which have been placed on the electronic public procurement portal and for which small and medium-sized enterprises only may submit a bid;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of lots} where $.tender.lots[].forSmallScaleBusiness **is** TRUE

4.1.13 Share of lots for SME

- Name: Share of lots for SME;
- Short description: this indicator presents the ratio of the number of lots which have been placed on the electronic public procurement portal and for which small and medium-sized enterprises only may submit a bid to the total number of lots which have been placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of lots for SME}
/
{Number of lots} * 100%

4.1.14 Number of re-announced procedures

- Name: Number of re-announced procedures;
- Short description: this indicator presents the number of procedures which were re-announced on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of procedures} where exists($.relatedProcesses[].id)

4.1.15 Number of republished lots

- Name: Number of republished lots;
- Short description: this indicator presents the number of lots which were republished on the electronic public procurement portal;
- Applications where used: procedures application;

- Data source: tendering API;
- Formula:

{Number of lots} where exists($.relatedProcesses[].id)

4.1.16 Average number of republished lots for a procedure

- Name: Average number of republished lots for a procedure;
- Short description: this indicator presents the average number of lots which were republished on the electronic public procurement portal for the one procedure placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of republished lots} / **{Number of procedures}**

4.1.17 Number of non-resident bidders

- Name: Number of non-resident bidders;
- Short description: this indicator presents the number of organizations registered outside the Republic of Belarus which have participated in public procurement tenders by using the electronic public procurement portal at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bidders} where $.parties[].address.countryName <> ‘Беларусь’

4.1.18 Average number of bidders per lot

- Name: Average number of bidders per lot;
- Short description: this indicator presents the average number of organizations participated in a lot of a public procurement procedure using the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count($.parties[].id) **where** ‘tenderer’ **in** $.parties[].roles[] / **{Number of lots}**

4.1.19 Number of non-resident winners

- Name: Number of non-resident winners;
- Short description: this indicator presents the number of organizations registered outside the Republic of Belarus which bids have been recognized (as a result of bids comparison and assessment) as the best ones at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of winners} where $.parties[].address.countryName <> 'Беларусь'

4.1.20 Number of published protocols

- Name: Number of published protocols;
- Short description: this indicator presents the number of obligatory protocols published by procuring entity on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

incremental_count where vTenderHasResultProtocol **is**TRUE **or** vTenderHasOpenBidsProtocol **is**TRUE **or** vTenderHasFirstPartsProtocol **is**TRUE **or** vTenderHasSecondPartsProtocol **is**TRUE **or** vTenderHasAuctionProtocol **is**TRUE

- *Hint: for each fulfilled condition do +1 count within one public procurement procedure.*

4.1.21 Number of bids

- Name: Number of bids;
- Short description: this indicator presents the number of bids for each lot which have been placed by bidders on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count($.bids.details[].id)

4.1.22 Average number of bids in a lot

- Name: Average number of bids in a lot;
- Short description: this indicator presents the average number of bids, submitted by bidders for one lot on the electronic public procurement portal (it is only calculated for successfully concluded lots in competitive procedures);

- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids}
/
{Number of successfully concluded lots}

4.1.23 Average number of withdrawn bids in a lot

- Name: Average number of withdrawn bids in a lot;
- Short description: this indicator presents the average number of withdrawn (by bidders using the electronic public procurement portal) bids in a lot (it is only calculated for successfully concluded lots in competitive procedures);
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].status = 'withdrawn'
/
{Number of successfully concluded lots}

4.1.24 Average number of rejected bids in a lot

- Name: Average number of rejected bids in a lot;
- Short description: this indicator presents the average number of rejected by procuring entity bids in a lot (it is only calculated for successfully concluded lots in competitive procedures);
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].status = 'disqualified'
/
{Number of successfully concluded lots}

4.1.25 Share of rejected bids

- Name: Share of rejected bids;
- Short description: this indicator presents the share of rejected by procuring entity bids among all proposals submitted by bidders;
- Applications where used: procedures application;
- Data source: tendering API;

- Formula:

{Number of bids} where $.bids.details[].status = 'disqualified'
/
{Number of bids} * 100%

4.1.26 Share of withdrawn bids

- Name: Share of withdrawn bids;
- Short description: this indicator presents the share of withdrawn by tenderers bids among all bids submitted on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].status = 'withdrawn'
/
{Number of bids} * 100%

4.1.27 Average number of bids with the margin preference for a lot

- Name: Average number of bids with the margin of preference for a lot;
- Short description: this indicator presents the average number of bids with margin of preference submitted by tenderers in a lot;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].preference <> 0
/
{Number of successfully concluded lot}

4.1.28 Share of bids with the margin of preference for a lot

- Name: Share of bids with the margin of preference for a lot;
- Short description: this indicator presents the share of bids with margin of preference submitted by tenderers among all bids submitted on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].preference <> 0

/

{Number of bids}

4.1.29 Share of winning bids with the margin of preference

- Name: Share of winning bids with the margin of preference;
- Short description: this indicator presents the share of bids with margin of preference which have been recognized (as a result of bids comparison and assessment) as the best ones among all bids submitted by tenderers on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

{Number of bids} where $.bids.details[].preference <> 0 **and (exists** $.awards[].id **where** $.awards[].status = 'active')

/

{Number of bids}

- *Hint: $.bids and $.awards[] are joined by lot. $.awards[].items[].relatedLot = $.bids.details[].relatedLot*

4.1.30 Number of organizations

- Name: Number of organizations;
- Short description: this indicator presents the number of organizations which took part in a tendering process in any role (as a bidder or awarded bidder or procuring entity) at least once;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'procuringEntity' **in** $.parties[].roles[] **or** 'tenderer' **in** $.parties[].roles[] **or** 'winner' **in** $.parties[].roles[]

4.1.31 Number of budget organizations

- Name: Number of budget organizations;
- Short description: this indicator presents the number of organizations supported by funding from the state budget which took part in a tendering process in any role (as a bidder or awarded bidder or procuring entity) at least once;
- Applications where used: procedures application;

- Data source: tendering API;
- Formula:

{Number of organizations} where $.parties[].details.budgetType = 'financedByBudget'

4.1.32 Average number of contracts per supplier

- Name: Average number of contracts per supplier;
- Short description: this indicator presents the average number of contracts signed by suppliers;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Number of contracts}
/
{Number of suppliers}

4.1.33 Number of contract positions

- Name: Number of contract positions;
- Short description: this indicator presents the number of positions in a contract which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

count($.contracts[].items[].id)

4.1.34 Share of non-resident suppliers

- Name: Share of non-resident suppliers;
- Short description: this indicator presents the share of organizations registered outside the Republic of Belarus which have at least one signed contract for providing goods (services/works) placed on the electronic public procurement portal among all suppliers;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Number of suppliers} where $.parties[].address.countryName <> 'Беларусь'
/
{Number of suppliers}

4.1.35 Share of contracting authorities from the capital

- Name: Share of contracting authorities from the capital;
- Short description: this indicator presents the share of contracting authorities registered in Minsk among all contracting authorities;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Number of contracting authorities} where $.parties[].address.locality = 'г. Минск'
/
{Number of contracting authorities}

4.1.36 Noncompetitive contracts number

- Name: Noncompetitive contracts number;
- Short description: this indicator presents the number of single source procedures which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Number of contracts} where $.tender.procurementMethodDetails = 'singleSource'

4.1.37 Share of noncompetitive contracts by number of contracts

- Name: Share of noncompetitive contracts by number of contracts;
- Short description: this indicator presents the share of single source procedures among all procedures which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Noncompetitive contracts number}
/
{Number of contracts}

4.1.38 Number of contracts (SME suppliers)

- Name: Number of contracts (SME suppliers);
- Short description: this indicator presents the number of public procurement contracts with SME suppliers which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;

- Data source: tendering API;
- Formula:

{Number of contracts} where ($.parties[].details.scale **in** (‘micro’, ‘mini’, ‘medium’) **and** ‘supplier’ **in** $.parties[].roles[]

- *Hint: each tender may be resulted in a number of contracts with different suppliers. Tender and supplier are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.1.39 Number of plans published

- Name: Number of plans published;
- Short description: this indicator presents the number of annual procurement plans which have been placed on the electronic public procurement portal;
- Applications where used: planning application;
- Data source: planning API;
- Formula:

count($.planning.id)

4.1.40 Number of plan items

- Name: Number of plan items;
- Short description: this indicator presents the number of items of annual procurement plans which have been placed on the electronic public procurement portal;
- Applications where used: planning application;
- Data source: planning API;
- Formula:

count($.planning.items[].id)

4.1.41 Number of contracting authorities (who have published an annual plan)

- Name: Number of contracting authorities;
- Short description: this indicator presents the number of organizations which have placed an annual plan on the electronic public procurement portal at least once;
- Applications where used: planning application;
- Data source: planning API;
- Formula:

count_unique($.parties[].id)

4.2 COST INDICATORS

4.2.1 Lots value, BYN

- Name: Lots value, BYN;
- Short description: this indicator presents the value of the procedures subjects of procurement;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

sum($.tender.lots[].value.amount)

4.2.2 Contracts positions value, BYN

- Name: Contracts positions value, BYN;
- Short description: this indicator presents the total value of positions of the contracts which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount)

4.2.3 Noncompetitive contracts positions value, BYN

- Name: Noncompetitive contracts positions value, BYN;
- Short description: this indicator presents the total value of positions of the single source contracts which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Contracts positions value} where $.tender.procurementMethodDetails = ‘singleSource’

4.2.4 Share of noncompetitive contracts by contracts positions value

- Name: Share of noncompetitive contracts by contracts positions value;
- Short description: this indicator presents the share of single source procedures positions value among all procedures which have been placed on the electronic public procurement portal;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Noncompetitive contracts positions value}
/
{Contracts positions value}

4.2.5 Contracts positions value with non-resident suppliers, BYN

- Name: Contracts positions value with non-resident suppliers;
- Short description: this indicator presents the total value of positions of the contracts which have been placed on the electronic public procurement portal and signed with suppliers registered outside the Republic of Belarus;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Contracts positions value} where ($.parties[].address.countryName <> 'Беларусь' and 'supplier' in $.parties[].roles[])

- *Hint: each tender may be resulted in a number of contracts with different suppliers. Contract and supplier are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where 'supplier' in $.parties[].roles[])*

4.2.6 Share of imported products by contracts positions value, BYN

- Name: Share of imported products by contracts positions value, BYN;
- Short description: this indicator presents the share of produced outside the Republic of Belarus positions of the contracts which have been placed on the electronic public procurement portal among all contracts positions;
- Applications where used: contracts application;
- Data source: tendering API;
- Formula:

{Contracts positions value} where ($.contracts[].items[].productCountry <> 'Беларусь')
/
{Contracts positions value}

4.2.7 Planned value, BYN

- Name: Planned value, BYN;
- Short description: this indicator presents the total value of annual procurement plans which have been placed on the electronic public procurement portal;
- Applications where used: planning application;
- Data source: planning API;

- Formula:

```
sum($.planning.items[].value.amount)
```

4.3 TIME DURATION INDICATORS

4.3.1 Average procedure duration

- Name: Average procedure stage duration;
- Short description: this indicator presents the average time length in days for a period which begins when procedure published on the electronic public procurement portal and ends when bidder accepted the award;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
avg(max($.awards[].dateCreated) - $.tender.datePublished)
```

- *Hint: this indicator is calculated only for successfully concluded procedures ($.tender.status = 'complete')*

4.3.2 Average enquiry and bidding period duration

- Name: Average enquiry and bidding period duration;
- Short description: this indicator presents the average time length in days for bids and enquiries submission and placing answers on these enquiries;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
avg($.tender.tenderPeriod.endDate - $.tender.datePublished)
```

- *Hint: this indicator is calculated only for successfully concluded procedures ($.tender.status = 'complete')*

4.3.3 Average awarding period duration

- Name: Average awarding period duration;
- Short description: this indicator presents the average time length in days for awarding period. This period begins right after the bidding period and ends when the awarded bid is chosen;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
avg(max($.awards[].dateCreated) - $.tender.tenderPeriod.endDate)
```

- *Hint: this indicator is calculated only for successfully concluded procedures ($.tender.status = 'complete')*

4.3.4 Average award publication period duration

- Name: Average award publication period duration;
- Short description: this indicator presents the average time length in days for award publication on the electronic public procurement portal. This period begins right after the awarding period and ends when award is placed on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
avg(max($.awards[].date) - max($.awards[].dateCreated))
```

- *Hint: this indicator is calculated only for successfully concluded procedures ($.tender.status = 'complete')*

4.3.5 Average time to answer enquiry

- Name: Average time to answer enquiry;
- Short description: this indicator presents the average time length in days for procuring entities to place a respond to requests for clarification on the electronic public procurement portal;
- Applications where used: procedures application;
- Data source: tendering API;
- Formula:

```
avg($.tender.enquiries[].dateAnswered - $.tender.enquiries[].date)
```

- *Hint: this indicator is calculated only for successfully concluded procedures ($.tender.status = 'complete')*

4.4 INDICATORS FOR ECC FORM

4.4.1 Row 01. Number of conducted public procurement procedures

- Data source: tendering API;
- Formula:

```
count($.tender.lots[].id)
```

4.4.2 Row 02. Number of procedures which do not lead to the conclusion of the contract

- Data source: tendering API;
- Formula:

{Row 01. Number of conducted public procurement procedures} where
$.tender.lots[].status <> 'complete'

4.4.3 Row 03. Number of bids submitted by potential suppliers

- Data source: tendering API;
- Formula:

count($.bids.details[].id)

4.4.4 Row 04. Georgia (number of bids submitted by potential suppliers)

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where
$.parties[].address.countryName = 'Армения'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.5 Row 05. Belarus (number of bids submitted by potential suppliers)

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where
$.parties[].address.countryName = 'Беларусь'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.6 Row 06. Kazakhstan (number of bids submitted by potential suppliers)

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where
$.parties[].address.countryName = 'Казахстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.7 Row 07. Kyrgyzstan (number of bids submitted by potential suppliers)

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where $.parties[].address.countryName = 'Кыргызстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.8 Row 08. Russia (number of bids submitted by potential suppliers)

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where $.parties[].address.countryName = 'Российская Федерация'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.9 Row 09. Number of bids not admitted to become the winning ones

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where $.bids.details[].status = 'disqualified'

4.4.10 Row 10. Georgia (Number of bids not admitted to become the winning ones)

- Data source: tendering API;
- Formula:

{Row 09. Number of bids not admitted to become the winning ones} where $.parties[].address.countryName = 'Армения'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.11 Row 11. Belarus (Number of bids not admitted to become the winning ones)

- Data source: tendering API;
- Formula:

{Row 09. Number of bids not admitted to become the winning ones} where $.parties[].address.countryName = 'Беларусь'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.12 Row 12. Kazakhstan (Number of bids not admitted to become the winning ones)

- Data source: tendering API;
- Formula:

{Row 09. Number of bids not admitted to become the winning ones} where $.parties[].address.countryName = 'Казахстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.13 Row 13. Kyrgyzstan (Number of bids not admitted to become the winning ones)

- Data source: tendering API;
- Formula:

{Row 09. Number of bids not admitted to become the winning ones} where $.parties[].address.countryName = 'Кыргызстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.14 Row 14. Russia (Number of bids not admitted to become the winning ones)

- Data source: tendering API;
- Formula:

{Row 09. Number of bids not admitted to become the winning ones} where $.parties[].address.countryName = 'Российская Федерация'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.15 Row 15. Number of withdrawn bids

- Data source: tendering API;
- Formula:

{Row 03. Number of bids submitted by potential suppliers} where $.bids.details[].status **=** $.parties[].address.countryName = 'withdrawn'

4.4.16 Row 16. Georgia (number of withdrawn bids)

- Data source: tendering API;
- Formula:

{Row 15. Number of withdrawn bids} where $.parties[].address.countryName = 'Армения'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.17 Row 17. Belarus (number of withdrawn bids)

- Data source: tendering API;
- Formula:

{Row 15. Number of withdrawn bids} where $.parties[].address.countryName = 'Беларусь'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.18 Row 18. Kazakhstan (number of withdrawn bids)

- Data source: tendering API;
- Formula:

{Row 15. Number of withdrawn bids} where $.parties[].address.countryName = 'Казахстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.19 Row 19. Kyrgyzstan (number of withdrawn bids)

- Data source: tendering API;
- Formula:

{Row 15. Number of withdrawn bids} where $.parties[].address.countryName = 'Кыргызстан'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.20 Row 20. Russia (number of withdrawn bids)

- Data source: tendering API;
- Formula:

{Row 15. Number of withdrawn bids} where $.parties[].address.countryName = 'Российская Федерация'

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = 'tenderer'). Suppliers and bids are joined in a way described below: $.bids.details[].tenderers[].id = ($.parties[].id where 'tenderer' in $.parties[].roles[])*

4.4.21 Row 21. Number of suppliers

- Data source: tendering API;
- Formula:

count_unique($.parties[].id) **where** 'winner' **in** $.parties[].roles[]

4.4.22 Row 22. Georgia (number of suppliers)

- Data source: tendering API;
- Formula:

{Row 21. Number of suppliers} where $.parties[].address.countryName = 'Армения'

4.4.23 Row 23. Belarus (number of suppliers)

- Data source: tendering API;

- Formula:

{Row 21. Number of suppliers} where $.parties[].address.countryName = ‘Беларусь’

4.4.24 Row 24. Kazakhstan (number of suppliers)

- Data source: tendering API;
- Formula:

{Row 21. Number of suppliers} where $.parties[].address.countryName = ‘Казахстан’

4.4.25 Row 25. Kyrgyzstan (number of suppliers)

- Data source: tendering API;
- Formula:

{Row 21. Number of suppliers} where $.parties[].address.countryName = ‘Кыргызстан’

4.4.26 Row 26. Russia (number of suppliers)

- Data source: tendering API;
- Formula:

{Row 21. Number of suppliers} where $.parties[].address.countryName = ‘Российская Федерация’

4.4.27 Row 27. Contracts value

- Data source: tendering API;
- Formula:

sum($.contracts.value.amount**)**

4.4.28 Row 28. Georgia (contracts value)

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.parties[].address.countryName = ‘Армения’

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = ‘tenderer’). Contracts and suppliers are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.4.29 Row 29. Belarus (contracts value)

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.parties[].address.countryName = ‘Беларусь’

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = ‘tenderer’). Contracts and suppliers are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.4.30 Row 30. Kazakhstan (contracts value)

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.parties[].address.countryName = ‘Казахстан’

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = ‘tenderer’). Contracts and suppliers are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.4.31 Row 31. Kyrgyzstan (contracts value)

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.parties[].address.countryName = ‘Кыргызстан’

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = ‘tenderer’). Contracts and suppliers are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.4.32 Row 32. Russia (contracts value)

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.parties[].address.countryName = ‘Российская Федерация’

- *Hint: use $.parties[].address.countryName of tenderer ($.parties[].roles[] = ‘tenderer’). Contracts and suppliers are joined in a way described below: $.contracts[].suppliers[].id = ($.parties[].id where ‘supplier’ in $.parties[].roles[])*

4.4.33 Row 33. Contracts value (with product from Georgia)

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].productCountry = ‘Армения’

4.4.34 Row 34. Contracts value (with product from Belarus)

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].productCountry = ‘Беларусь’

4.4.35 Row 35. Contracts value (with product from Kazakhstan)

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].productCountry = ‘Казахстан’

4.4.36 Row 36. Contracts value (with product from Kyrgyzstan)

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].productCountry = ‘Кыргызстан’

4.4.37 Row 37. Contracts value (with product from Russia)

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].productCountry = ‘Российская Федерация’

4.4.38 Row 38. Contracts financed by budget

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.contracts[].funds = ‘budget’

4.4.39 Row 39. Contracts non financed by budget

- Data source: tendering API;
- Formula:

{Row 27. Contracts value} where $.contracts[].funds = ‘own’

4.4.40 Row 40. Number of contract positions with goods

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].positionType = ‘goods’

4.4.41 Row 41. Number of contract positions with works and services

- Data source: tendering API;
- Formula:

sum($.contracts[].items[].value.amount) **where** $.contracts[].items[].positionType = ‘services’