

# New array to record the consolidated experience of the bidders who contract with the state in road infrastructure sector in Colombia

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**Abstract**– This document gives seeking to establish a fair and transparent competition in the sector of road infrastructure, is the need to design and implement a matrix, where the experience of the bidders will be consolidated; This tool will serve as support assessment processes for projects of the state, this can ensure that contractual documents provided are accurate.

**Keywords** - Road Infrastructure, suppliers, consolidate, matrix evaluation processes contractual documents ..

## I. INTRODUCTION

Today there are gaps or weaknesses in the procurement law leading to somehow generate actions bidders to evade regulations with this situation as creating some kind of alliance as temporary Unions or Consortiums are presented; in order to obtain a greater chance of winning processes.

Seeking to establish a fair and transparent competition in road infrastructure sector is the need to design and implement a matrix where the experience of the bidders will be consolidated; This tool will serve as support assessment processes for projects of the state, this can ensure that contractual documents provided are accurate [1]

To know the history of each supplier contracts, evaluation reports published each entity in the only recruitment portal SECOP SECOP I and II, in order to obtain data that it has signed contracts each bidder shall be consulted beforehand[2].

## II. METHODOLOGY

information from bidders in the matrix was consolidated from the experience of historical processes published in the SECOP I and II SECOP.

### A. Queryevaluationreports.

To know the history of each supplier contracts, evaluation reports published each entity in the only recruitment portal SECOP SECOP I and II, in order to obtain data from the contracts signed each bidder has previously consulted.

### B. matrixprocessingexperience

With this magnetically recorded information, which served as the basis for the PivotTable, looking for important information on who justifies higher qualifications, in money and processes, type of experience, and establish what their scope. It could also be known that bidders belong to the small business sector and to establish possible partnerships.

However, it was verified that the processes published comply with the field of road infrastructure such as roads, bridges and / or viaducts, grants, projects and tolls 4G sector; they must be framed within codes UNSPSC (Classifier of Goods, Works and Services of the United Nations) classification, with this ensures that the filter projects to verify is within the field of consulting and / or Interventoría.

To build this matrix, magnetically recorded information in a file in Excel, which served as the basis for a PivotTable, from the information recorded on the trading platforms SECOP I and SECOP II, which contains data such as type of process, official budget, term awarded to, characteristics of the offeror and, if the type of consortium participation of members states and ends with the criterion of choice[3].

### C. Identification background and experience of bidders

In a checklist the tenders submitted in each of the related processes, this information is obtained the day after the closing of the process. the timing of the process was considered to be able to track all stages

of this. When the contracting entity publishes a report evaluating the proposals, it made a detailed analysis of the document, since, hence all details of the contracts it has signed each bidder before thus obtained is set history each offeror.

### III. RESULTS

Processes evaluated in the years above, it appears that, in the main contracting entities have been working on implementing fair and clear sheets, according to the need of the work to contract, which has favored the plurality of suppliers and free competition, this promotes confidence and trust among bidders to participate. According to the above, you have the following average bidders for each public entity consulted [4].

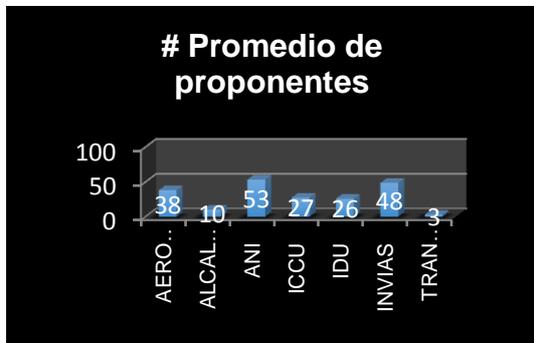


Fig 1: Average number of bidders for each entity

As for respondent’s processes, you may find that a large percentage of the scope of bidders are the routes and concessions, others are distributed evenly. This shows that the processes are not directed or focused exclusively on way, since the requirement of the specifications are increasing, leading to compliance with the requirements of experience is limited, this means that new or small bidders cannot incur in public procurement.

Wellall that a healthy rivalry generates greater competitiveness, because that means that there is a competition in which participation is made on merit, know it. According to the analysis, of respondents processes, could you establish that in the sector of road infrastructure, more than 500 suppliers, including national and international firms, which when accessing a type statement, in which promotes greater participation and concurrence of these would allow the State Agency can get better value propositions, this because of better deals in a matter of economics [5].

TABLE 1  
Competition for operating revenues

N.º	EMPRESA	CANTIDAD DE CONTRATOS	VALOR DE PARTICIPACION
1	C&M CONSULTORES	2	\$ 65.567.920.247
2	JOYCO SAS	7	\$ 48.765.788.927
3	SILVA CARRENO & ASOCIADOS SAS	2	\$ 33.849.704.767
4	AFA CONSULTORES Y CONSTRUCTORES S.A.	1	\$ 32.726.303.868
5	MAB INGENIERIA DE VALOR SA	6	\$ 24.897.906.626
6	GINPROSA INGENIERIA SL SUCURSAL EN COLOMBIA	4	\$ 17.581.477.483
7	ARREDONDO MADRID INGENIEROS CIVILES S.A.S (AIM S.A.S)	4	\$ 15.037.560.032
8	GINPROCOL SAS	2	\$ 12.234.413.989
9	INTERDISEÑOS INTERNACIONALES SAS	1	\$ 11.400.000.000
10	SILVA CARRENO ADMINISTRACION E INGENIERIA SAS	1	\$ 9.254.616.799

TABLE 2  
Competition by number of contracts awarded

N.º	EMPRESA	CANTIDAD DE CONTRATOS	VALOR DE PARTICIPACION
1	JOYCO SAS	7	\$ 48.765.788.927
2	MAB INGENIERIA DE VALOR SA	6	\$ 24.897.906.626
3	BATEMAN INGENIERIA SA	4	\$ 4.677.353.145
4	ARREDONDO MADRID INGENIEROS CIVILES S.A.S (AIM S.A.S)	4	\$ 15.037.560.032
5	GINPROSA INGENIERIA SL SUCURSAL EN COLOMBIA	4	\$ 17.581.477.483
6	ARENAS DE LA HOZ INGENIERIA SAS	3	\$ 669.100.328
7	ECOVIAS SAS	3	\$ 5.599.193.357
8	INGENIERIA DE PROYECTOS SAS	3	\$ 7.360.201.154
9	ECG COLOMBIA SAS	3	\$ 2.131.487.383
10	SAITEC SA SUCURSAL COLOMBIA	3	\$ 7.228.122.678

Accordingly reflected in the matrix of experience, we can see that is increasingly associated boom to meet 100% of the requirements and obtain greater chance of success [6].

Of the 86 surveyed processes could set the type of submission of tenders as follows:

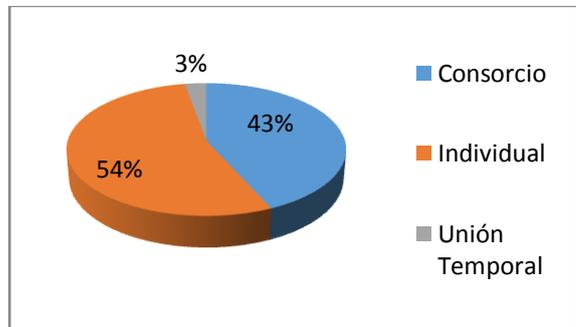


Fig. 2: Format of proposals

Every time you see the need to generate strategic alliances, and according to the chart above evidenced that a large percentage of suppliers that continue to make the experience individually, but according to the magnitude of future works contract, bidders must start having approaches with direct competitors regardless of having other fields.

Through the information collected and consolidated in the matrix of experience of the 86 processes consulted on trading platforms, SECOP SECOP I and II, it was established that, during the evaluation period, year 2017-2018, there are 518 bidders of which 131 bidders came bidders, ie 25% were successful [7].

In short, the experience of 518 bidders, in the fields of action of the contracts submitted to participate in the 86 processes, we have:

Campo de acción	Cantidad	Porcentaje
Administración Vial	1	0,04%
Aeropistas	113	4,33%
Concesión	198	7,59%
Peajes	22	0,84%
Puentes	55	2,11%
Túnel	10	0,38%
Viaductos	9	0,34%
Vías	2202	84,37%
<b>Total general</b>	<b>2610</b>	<b>100%</b>

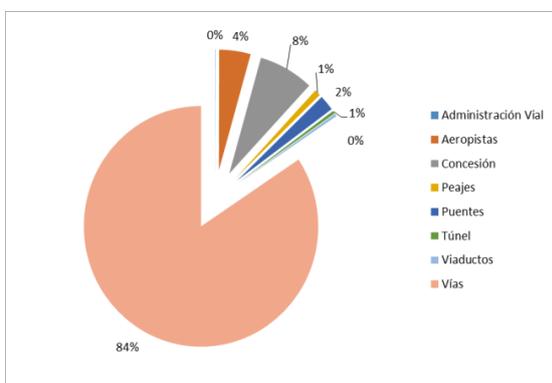


Fig. 3: Direct competition

Of respondents processes you may find that a large percentage of the scope of bidders are the routes and concessions, others are distributed evenly, this shows, that the processes are not directed or focused exclusively on the tracks, all once the requirement of the specifications is higher, leading to compliance with the requirements of experience is limited, this means that new or small bidders cannot incur in public procurement.

#### IV. CONCLUSIONS

The sector of road infrastructure along with those consulted processes, shows a behavior and commitment of entities to promote the plurality of bidders, since guarantees a free participation, concurrency and fair. It can also show that in these processes consulted recruitment is focused on a smaller percentage of small businesses and a large percentage in medium-sized enterprises, which must be equitable for all and so have all the same chance to win, or that processes are evenly distributed.

Investment in the sector of road infrastructure promotes economic growth and creates benefits not

only for bidders, if not for the community living in the area and is impacted positively, since, projects to build are great magnitude and importance for development and progress.

Although such sheets had coming into force from April 1, 2019, this has not happened, due to the upcoming elections to elect governors and mayors, are expected to once posesionados the new leadership, it is implemented that immediately law and thus begin to see the true effects and benefits from 2020

With the investment made by the national government in different cities, through programs such as public transport, you can leverage investments to make more competitive the country's roads

#### REFERENCES

- [1] Senate, through which measures for efficiency and transparency in Law 80 of 1993 are introduced and other general provisions dictate hiring. Bogota: sn, 2007.
- [2] CAMILO, ROA CRISTIAN MOLINA. 2017. Repository Catholic University of Colombia. [Online]. Available <https://repository.ucatolica.edu.co/bitstream/10983/2184/3/ARTICULO.pdf>.
- [3] COLOMBIA BUY EFFICIENT. 2019. [Online]. Available: <https://www.colombiacompra.gov.co/secop-ii>
- [4] PUBLIC OECD. SECRETARIAT OF THE FUNCTION. 2014. bribery in government procurement methods, actors and measures to combat it. 2014.
- [5] PORTAFOLIO [Online] 2019. Available: <https://www.portafolio.co/economia/infraestructura/colombia-estrena-pliegos-tipo-en-las-obras-publicas-528079>
- [6] ACT 816 of 2003. By which supports national industry through public procurement. 2003.
- [7] Senate 2004. By that Law 590 of 2000 on promoting the development of micro, small and medium Colombian company is modified and other provisions. Bogota: sn, 2004.