**OCP MEL Data Quality Report-Colombia**

First draft

2018. 10.01.

*Ágnes Czibik, Mihály Fazekas, Nóra Regös*

Government Transparency Institute

**Summary**

In international comparative perspective, Colombia has a highly developed public procurement regulatory and data system which has gone one step further with the implementation of OCDS. Clearly these rich and readily downloadable datasets, national and OCDS compliant, will be immensely useful for local and international actors both within and outside government.

National, local data complexity and OCDS comprehensiveness - The final dataset is based on the local sources SECOP I and II. SECOP I included most of the data points relevant for indicator calculation, covered a longer period of time than SECOP II, which was launched in 2016. In addition, contracts available in OCDS json were almost entirely overlapping with the observations of SECOP I, although with reduced availability of some of the key variables and lacking a unique variable by which the separate sub files generated by the flatten tool could have been merged. A possible solution for the lack of ID to merge on could be to introduce a new functionality to the OCDS Flatten tool which creates a single combined flat csv of all currently created csv-s.

Other issue was the different scope of variables of the sources. It can get difficult to match the values of a variable in the local publication to the OCDS code list without expert knowledge on the local public procurement procedure. OCDS-language is relatively easy-to-understand for non-professionals, while official national sources often use specific, legalistic terminology.

We would recommend to further support OCDS to act as an integrator of all relevant national data sources both in terms of variable content and coverage of contracts which would require to regularly check if OCDS still acts as the most comprehensive integrator of national datasets. Such an approach would prevent gradual coverage decay (e.g. when national datasets introduce new fields but don’t add them to OCDS).

The rate of data completeness - There were rich data available on contract details such as value amount, dates, suppliers and buyers identification, tender procurement method, tenders and awards. Missing rates ranged from 0% to 18%. As the other data points related to tender (dates and value amount) and award status were not included in SECOP I, only in SECOP II. A solution can be to provide full and up to date documentation on national procurement datasets facilitating comparison to OCDS and wider data use and to ensure that IDs in national sources (SECOP I and II) and OCDS allow for verifying that all contracts in national sources are also published in OCDS.

A possible solution to improve data completeness can be to convince publishers to publish all essential data points underpinning indicator calculation and analysis. In addition, to regularly monitor simple missing rate indices for each key variable and engage publishers on why missing rates are high or moving in the wrong direction and devise strategies for decreasing missing rates without compromising on truthfulness of entered values.

**A comprehensive data collection exercise**

We carried out a comprehensive search for relevant public procurement and linked datasets centered on OCDS data but then branching out to other sources to provide an as comprehensive as possible combined dataset. Below we briefly describe each step.

1. *Identifying all national sources, OCDS and other national*

The identified sources were official websites of governments and public institutions that are entitled to collect, publish information and follow-up on national public tenders. Tenders published only on local entities’ websites were not collected.

In Colombia there are three separate publication systems for handling public procurement data *SECOP I&II* and *Tienda Virtual.* The latter rather serves as an online catalogue for registered municipal bodies and suppliers for simple public purchases.

Full list of sources identified and used is in Annex A1.

1. *Annotation of sources*

In order to be able to compare and merge databases gathered from various sources, structuring and defining information on contracting in a distinct manner, annotation was the starting point. This process included the preparation of a list of variables and values in OCDS json, a list of variables and values in local json or csv data sources. In addition, the identification of material published in local data sources equivalent to OCDS fields, which in some cases was not self-explanatory, as there were no clear data description of local sources. As a consequence, matching and the interpretation of the lists are not easily standardized, opinions on them might differ. (See Annex A2 and A3).

1. *Downloading data from the sources*

Our programming team developed a set of codes to extract data from the above mentioned sources, transforming them into a new format providing input for subsequent data manipulation tasks. All codes can be found on [Github](https://github.com/govtransparency/digiextractor).

In the case of Colombia, information related to public contracts and procedures published from 2011 until 2018 were included in SECOP I, however there is a ongoing transition to SECOP II, which was launched in 2016. This means that some tenders have been launched in SECOP I while others in SECOP II since 2016, requiring the use of both datasets forgetting a complete picture of contracting in Colombia. During the downloading process, the Colombian publication system was updated, therefore data were downloaded in two parts, in each case in local structure and csv format.

1. *Data conversion and merging*

In the case of Colombia, at first we considered to use OCDS data as it was already in the desired structure. This attempt failed due to the lack of a globally unique variable by which we could merge the several sub files generated from jsons. Then, we decided to use only local data sources as they included all the relevant variables and because all data available in OCDS were taken from local data sources (mainly from SECOP I) without adding new information to them.

SECOP I became the main dataset for further analysis as it covered a longer time period, included more insightful data and observations than other available sources. Some variables were missing from SECOP I (tender/endDate, award/startDate, award/value/amount, number/ofTenderers, contract/status) that were included in SECOP II, however there were no overlaps between contracts, no unique ID was available to surely identify if the given contracts belong together, dates, value amount, title differed. Hence, we assumed that there is no overlapping publication in SECOP I and II, but could not verify it.

Tienda Virtual operates differently and has a completely distinct function, variables, way fewer number of observations as the above mentioned systems hence we analysed it separately.

1. *Creating a single csv file*

Preparing the dataset for analysis from different csv tables extracted from national procurement systems open data sources was done using R. This set of data merges produced a 2-dimensional table containing all necessary information for indicator calculation with contracts in rows, variables in columns. Final dataset is available [here](https://drive.google.com/open?id=1Vmdo5A0hSTBw8P2m1jPDZQVK8-6NvxC7).

**Data cleaning and standardizing formats**

Before starting to calculate the indicators and to analyse the data, data cleaning is essential to detect, correct and/or remove inaccurate records or fields from the database. Without this step, errors might bias the analysis and so would lead to incorrect or incomplete insights, hence misguided solutions and recommendations.

After importing the data file into R, the next step is to select and rename relevant variables to OCDS equivalents and to remove the rest. At opening the file, encoding type LATIN 1 can be chosen so that Spanish characters are displayed correctly.

When using ‘read.csv’ or ‘read\_csv’ command of R, the default separator is comma, which might cut string variables of longer names or addresses incorrectly, that affects the database’s structure and variable types. Source file should be prepared very carefully, also ensuring data points are not swapped and are in the right order. In addition, removing special characters, typos in names and addresses are also reduces the possibility of duplication, misleading results.

To check these, a general overview of data structure, variable types is recommended, especially as SECOP I file was too large to proceed all cleaning steps at once, thus it was divided into chunk files of 1 million observation each. Variable types matter for processing commands in R. For example, if R defines contract\_value\_amount as character, we will not be able to use it for calculations, it has to be converted to a numeric variable. R modified variable types to factor and character which had to be corrected to integer in case of id variables, with some exceptions that were kept as characters; short date format instead of the long and inconvenient to use POSIXct (YMD HS) in case of date variables and characters in case of name, title, procedure type variables. Value amounts were changed to numeric.

Before this step, we defined all 0 values, empty cells, ‘No registrado’, ‘No definido’ as missing values (‘NA’) and also removed first two rows of the given chunk file which were identical to the last rows of the previous one to avoid duplicate rows.

Tender status, procurement method and category were redefined by using the OCDS terms. As the original definitions were not standard and slightly differed even if they referred to the same item, patterns were used to simplify the process.

Before merging together all these sub files of SECOP I into a single dataset, we had to ensure, column names and their order are the same in each. Completely duplicate and almost entirely empty rows were removed.

Since there were no apparent overlaps between SECOP I and II, we appended them rather than merging on contract ID or any other identifier.

**Variables used for indicator calculation**

The table below includes the summary of missing rates of variables we use for calculating indicators defined by OCP and national counterparts.

*Table 1. Summary of variables used for indicator calculations (fields highlighted in red were missing from the datasets; in some cases NA also indicates the variables that might be available in that source but were not added to the final database)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Missing (%)** | **Missing % SECOP I** | **Missing % SECOP II** |
| **tender/id (instead: contract/id)** | **11.4%** | **11.4%** | **0%** |
| **tender/startDate (instead: contract/start/date)** | **12%** | **12%** | **15%** |
| **tender/endDate (instead: contract/end/date)** | **11.6%** | **11.6%** | **55%** |
| **award/supplier/id** | **13%** | **13%** | **0.3%** |
| **award/supplier/name** | **11.4%** | **11.4%** | **4.2%** |
| **contract/id** | **11.4%** | **11.4%** | **0%** |
| **contracts/awardID** | **11.4%** | **11.4%** | **0.3%** |
| **award/value/amount (instead:tender/value/amount)** | **7.8%** | **NA** | **65%** |
| **contract/value/amount** | **18%** | **18%** | **10%** |
| **buyer/id** | **17%** | **17%** | **4.7%** |
| **buyer/name** | **0%** | **0%** | **0%** |
| **number/of/tenderers** | **NA** | **NA** | **60.4%** |
| **tender/procurement/method** | **0%** | **0%** | **0%** |
| **award/status (instead: tender/status)** | **0%** | **0%** | **0%** |
| **tender/value/amount** | **7.8%** | **7.8%** | **31.4%** |
| **contract/amendment/date** | **NA** | **NA** | **NA** |

*Rate of missing values*

The percentage of missings values can determine if a variable can be reliably used for analysis or not, the data available contains enough valid information. We replaced nonsensical values that do not belong to the given variable, empty cells, observations with 0 value with ‘NA’.

Normally we considered variables for further analysis with a maximum of 10-15% missing rate. As this quality standard reflects our analytical needs (e.g. data will be used for auditing individual contracts or only for providing broad policy advice over longer periods of time) different cut-points can be set for different goals. While we appended SECOP I and II, for the sake of precision, we report data quality figures separately for the two systems. In addition, seeing data availability by the two systems also allows to map cases of variable availability discrepancies between them (i.e. when a variables is only available in one of the two systems). Where a certain variable was not available in SECOP I, we tried to find an alternative, written in parenthesis.

*Outlier detection - contract values*

Amount values (contract, tender, award) are typically central to any analysis one does either for calculating indicators directly or for interpreting other indicators (e.g. bidder number for small and large contracts). We considered those values as outliers which were lower than 10 554 606 COP (= 300 €) or higher than 35 165 654 708 313 COP (= 10000000000 €) . While these values are imperfect, that is some erroneous values will remain in the dataset while some correct values will be removed, they nevertheless represent our best guess at typical outlier values based on European examples we encountered (i.e. DIGIWHIST EUR outlier cut-points exchanged into COP). The low cut-point is designed to remove those values which are unit prices rather than global/total prices hence would bias the value distributions. While the high value threshold is designed to remove those values which are magically high, very likely resulting from typos rather than actual money spent.

*National public procurement data - SECOP I*

The publicly available national procurement data in Colombia covers a relatively long period of time starting from 2011 until 2018. In general, the data completeness, especially on certain aspects of tender phase (item classification, procurement method, status, procurement category) and basic information related to buyers (buyer name, buyer level, buyer additional id) are almost perfect, the missing rates are close to zero.

Mostly, dates related to the contract period (start, end date, date of signature and duration in days) were available, the missing rate were around 11-12%.

General data on awards and awarded suppliers, such as supplier name, id, award id were missing on a low rate (around 10%).

Even after employing some outlier removal, the missing rate of contract prices only increased from 0% to 18%, while tender value amount missing rate remained low, 7.8%. Interestingly, both variables contained plenty of 0 values initially which may signal that the corresponding tenders were unsuccessful or contract value is not reported for a legallí permissible reason (e.g. commercial confidentiality, national security concerns). There were no data available on estimated contract values or on spending during the implementation phase. These fields hold valuable information on public procurement efficiency, value for money and potential risk of corruption. Data publishers must be aware of the importance of these variables when filling out data in the publication system.

On the other hand, it is hard to fit the original variables into the OCDS structure of different layers referring to the several phases of public procurement (tender, award decision, contract, implementation period), so the missing rates might be different if a different layer is taken as unit of observation (e.g. tender rather than contract).

*National public procurement data - SECOP II*

Completeness of variables can be considered very high, the typical missing rate is or very close to 0%, such as contract and award IDs, award status, tender procurement method and buyer name. Supplier name and buyer ID had a missing rate of 4.2-4.7%, which is quite low. For more interesting and insightful variables, such as tender and award value amounts, number of tenderers or contract end date, the missing rates were much higher, ranged between 30 - 55%, while contract values had lower missing rate at 10%.

To be able to carry out solid, robust analysis with meaningful insights, the improvement of fill rate of dates, value amounts and status of the different contracting stages (tender, award, contract, implementation) with real-time data should be encouraged and emphasized among data publishers by providing clear explanation on the importance of these variables.

*National public procurement data - Tienda Virtual*

The system serves as platform for municipal bodies and registered suppliers to exchange goods and services in a simplified, quick manner, similarly to a webshop.

Therefore the dataset mostly contained general information that are necessary for completing the purchase, like the buyer’s name, its type, sector, contact availability, the date of purchase, the supplier’s name. Contract status which was closed or terminated. Further information on the purchased item and its price were collected, as well. The missing rate of most variables was very close to 0%, except tender value amount for which missing rate increased to 13% after removing outliers. This is not surprising as the process to complete a purchase on the platform is very easy and fast, offering a wide-scale of possibilities from low-volume purchases to larger works, goods and services. It might be that our lower bound threshold for contract values was too conservative for this particular sample.

**What have we learned, what can be improved?**

First of all, it is important to emphasize how useful it is that Colombia publishes rich, detailed, downloadable datasets on public procurement. This goes both for the OCDS json publication and the local csv datasets. In many countries of the world, including Europe, it requires much harder work to access rich data like this.

However, the publication process still can be improved. We summarize our experience we gained during the data collection work from annotation to indicator calculation.

1. *The issue of parallel publications - OCDS and local datasets*

The scope of published contracts differs by source, however this discrepancy and the precise degree of overlap among different datasets are unclear without detailed investigation. We tested overlap by downloading all data: close to 6 million records both in OCDS and in local csv publication SECOP I that entirely overlapped. There were significantly less, around 185 000 observations accessible in SECOP II which is a completely independent system, there were no overlaps between contracts of the two sources to the best of our knowledge.

The scope of published variables is different. On the one hand, some information cannot be fitted easily into OCDS structure - this is not necessarily a problem, because OCDS does not have to reflect all local specificities but to capture general features of public procurement which are understandable in many countries. On the other hand, there are valuable variables in local sources which could have been fitted into OCDS but they are missing from the OCDS json for some reason. Thus, users might feel the urge to use both datasets - OCDS and local publication - but linking datasets together is complex and prone to mistakes compared to use only the OCDS json.

Such variables missing from OCDS are for example:

* tender/status - Estado del Proceso
* tender/procurement/method - Tipo de Proceso
* tender/procurement/category - Tipo de Contrato

An additional problem with discrepancies in variable scope is that it can get difficult to match the values of a variable in the local publication to the OCDS code list without expert knowledge on the local public procurement procedure. OCDS-language is relatively easy-to-understand for non-professionals, while official national sources often use specific, legalistic terminology.

Such problems arose for example when trying to match the values below:

|  |  |
| --- | --- |
| Values of ‘Tipo de Contrato’ in Colombia | Values of tender/mainProcurementCategory |
| Compraventa | GOODS |
| Obra | WORKS |
| Ventas de muebles | SERVICES |
| Servicios de aprovisionamiento |  |
| Interventoría |  |
| Arrendamiento Muebles |  |
| Empréstito |  |
| Seguros |  |
| Comisión |  |
| Alquiler de edificios |  |
| Acuerdo Marco |  |
| ND |  |
| Suministros |  |
| Consultoría |  |
| 27 - Otros servicios |  |
| Concesión |  |

RECOMMENDATION:

Make sure OCDS serves as an integrator of all relevant national data sources both in terms of variable content and coverage of contracts (e.g. years and budgets). Regularly check if OCDS still acts as the most comprehensive integrator of national datasets in order to avoid gradual coverage decay (e.g. when national datasets introduce new fields). Make sure that IDs in national sources (SECOP I and II) and OCDS allow for verifying that all contracts in national sources are also published in OCDS.

1. *Indicator building: data scope, quality, and documentation*

*2.1 Non-available key data points*

Essential information were not part of the datasets on tender, such as tender start and end date, tender ID and number of tenderers and on awards, like award value and award status. Information on milestones, implementation and planning phase values were completely lacking.

RECOMMENDATION:

Engage with publishers in order to convince them to publish all essential data points underpinning indicator calculation and analysis.

*2.2 Missing values*

As we pointed out already above, some essential values were missing on tenders (id, start and end date, number of tenderers) or on awards value, also no records were available on implementation and planning phase, therefore we needed to look for alternative solutions. On the other hand, data on contract values, dates, participating actors (buyers and suppliers) had rich quality, the completeness of those variables were mostly around 90%. Some of those can be valid alternatives to or the above mentioned fields with high missing rates.

An explanation for lacking the above mentioned data points might be related to structural issues, that is fitting multiple fields from a national data source into a single OCDS field might be a difficult and error-prone task. Alternatively it is also possible that those fields with high missing rate were not filled in the original source to start with (this would chyme with many European experiences of DIGIWHIST).

Removing outliers from value amounts did not change the missing rate drastically as they already contained high number of 0 values. We considered value amounts lower than 10 554 606 COP (= 300 €) and above 35 165 654 708 313 COP (= 10000000000 €) as outliers, hence removed them. After removing such outliers, the contract value amount missing rate increased from 0% to 18%; tender value amount went 7.8% missing.

RECOMMENDATION:

Regularly monitor simple missing rate indices for each key variable and engage publishers on why missing rates are high or moving in the wrong direction and devise strategies for decreasing missing rates without compromising on truthfulness of entered values.

*2.3 Documentation, annotation*

Detailed description of data extracted from local sources, explaining in depth the various fields would improve the process of annotation, and so probably would make the data transition between multiple systems more efficient and less uncertain. This is valid almost to any field. For example, better understanding of what a certain value amount variable cover exactly: is it net or gross amount?; are they unit/part/total values? Was it part of the main project or an additional cost?, etc. Another common problem is the categorization of status. Sometimes it is challenging to classify ten or more different status categories into the four categories of OCDS. All these difficulties might be frustrating for public officials who are in charge to complete the required fields and will decrease their willingness to do so, leaving key parts empty, and losing important information. Inappropriate or lack of such documentation also impedes insightful analyses.

RECOMMENDATION:

Provide full and up to date documentation on national procurement datasets facilitating comparison to OCDS and wider data use.

**Annex A1 List of data sources in Colombia**

|  |  |  |
| --- | --- | --- |
| Description | URL | Format |
| Open public procurement data - SECOP Open Data in the OCDS / EDCA standard | <https://api.colombiacompra.gov.co/releases/> | OCDS, json |
| SECOP I (before update, no longer available) | <https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-I-Consolidado/ewm2-yzgs> | Local structure, csv, json, API |
| SECOP II (before update, no longer available) | <https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-II-Consolidado/m58t-y685> | Local structure, csv, json, API |
| Digital marketplace purchases | <https://www.datos.gov.co/Gastos-Gubernamentales/Tienda-Virtual-del-Estado-Colombiano-Consolidado/rgxm-mmea> | Local structure, csv, json, API |
| SECOP I (after update, currently available) | <https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-I/nuxh-53y2> | Local structure, csv, json, API |
| SECOP II contracts (after update, currently available) | <https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-II-Contratos/gnxj-bape> | Local structure, csv, json, API |
| SECOP II procedures (after update, currently available) | <https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-II-Procesos/aimg-uskh> | Local structure, csv, json, API |

**Annex A2 List of variable annotation**

SECOP I

|  |  |  |
| --- | --- | --- |
| Source: https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-I/nuxh-53y2 | |  |
|  |
| **Original variable name** | **OCDS equivalent** |  |
| UID | none (kept as UID) |  |
| Anno Cargue SECOP | none |  |
| Anno Firma del Contrato | none |  |
| Nivel Entidad | none |  |
| Orden Entidad | none |  |
| Nombre de la Entidad | buyer/name |  |
| NIT de la Entidad | buyer/identifier/id |  |
| Código de la Entidad | buyer/additionalIdentifiers/id |  |
| ID Tipo de Proceso | tender/procurementMethod |  |
| Tipo de Proceso | tender/procurementMethod |  |
| Estado del Proceso | tender/status |  |
| Causal de Otras Formas de Contratacion Directa | none |  |
| ID Regimen de Contratacion | none |  |
| Regimen de Contratacion | none |  |
| ID Objeto a Contratar | tender/items/classification/id |  |
| Objeto a Contratar | none |  |
| Detalle del Objeto a Contratar | tender/description |  |
| Tipo de Contrato | tender/mainProcurementCategory |  |
| Municipio Obtencion | none |  |
| Municipio Entrega | none |  |
| Municipios Ejecucion | none |  |
| Fecha de Cargue en el SECOP | none |  |
| Numero de Constancia | none |  |
| Numero de Proceso | ocid |  |
| Numero del Contrato | contracts/id |  |
| Cuantia Proceso | tender/value/amount |  |
| ID Grupo | none |  |
| Nombre Grupo | none |  |
| ID Familia | none |  |
| Nombre Familia | none |  |
| ID Clase | none |  |
| Nombre Clase | none |  |
| ID Ajudicacion | none |  |
| Tipo Identifi del Contratista | awards/suppliers/identifier/scheme |  |
| Identificacion del Contratista | awards/suppliers/identifier/id |  |
| Nom Raz Social Contratista | awards/suppliers/name |  |
| Dpto y Muni Contratista | none |  |
| Tipo Doc Representante Legal | none |  |
| Identific del Represen Legal | none |  |
| Nombre del Represen Legal | none |  |
| Fecha de Firma del Contrato | contracts/dateSigned |  |
| Fecha Ini Ejec Contrato | contracts/period/startDate |  |
| Plazo de Ejec del Contrato | contracts/period/durationInDays |  |
| Rango de Ejec del Contrato | contracts/period/durationInDays |  |
| Tiempo Adiciones en Dias | none |  |
| Tiempo Adiciones en Meses | none |  |
| Fecha Fin Ejec Contrato | contracts/period/endDate |  |
| Compromiso Presupuestal | none |  |
| Cuantia Contrato | contracts/value/amount |  |
| Valor Total de Adiciones | none |  |
| Valor Contrato con Adiciones | none |  |
| Objeto del Contrato a la Firma | none |  |
| ID Origen de los Recursos | planning/budget/projectID |  |
| Origen de los Recursos | planning/budget/project |  |
| Codigo BPIN | none |  |
| Proponentes Seleccionados | none |  |
| Calificacion Definitiva | none |  |
| ID Sub Unidad Ejecutora | none |  |
| Nombre Sub Unidad Ejecutora | none |  |
| Moneda | contracts/value/currency |  |
| EsPostConflicto | none |  |
| Ruta Proceso en SECOP I | tender/documents/url |  |

SECOP II

|  |  |
| --- | --- |
| https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-II-Contratos/gnxj-bape | |
| https://www.datos.gov.co/Gastos-Gubernamentales/SECOP-II-Procesos/aimg-uskh | |
| **Original variable** | **OCDS equivalent** |
| Nombre Entidad | buyer/name |
| Nit Entidad | buyer/identifier/id |
| Proceso de Compra | ocid |
| Descripción del Proceso | tender/description |
| Tipo de Contrato | tender/mainProcurementCategory |
| Referencia del Contrato | none |
| Fecha de Inicio del Contrato | contracts/period/startDate |
| Fecha de Fin del Contrato | contracts/period/endDate |
| Fecha de Inicio de Ejecucion | none |
| Fecha de Fin de Ejecucion | none |
| Condiciones de Entrega | none |
| Proveedor Adjudicado | awards/suppliers/name |
| Es Grupo | none |
| Estado Contrato | contracts/status |
| Habilita Pago Adelantado | none |
| Liquidacion | none |
| Obligaciones Ambientales | none |
| Obligaciones Postconsumo | none |
| Reversion | none |
| Valor del Contrato | contracts/value/amount |
| Valor de pago adelantado | none |
| Valor Facturado | none |
| Valor Pendiente de Pago | none |
| Valor Pagado | contracts/implementation/transactions/value/amount |
| Valor Amortizado | none |
| Valor Pendiente de Amortizacion | none |
| Valor Pendiente de Ejecucion | none |
| Codigo de Categoria Principal | tender/items/classification/id |
| Tipo de Proceso | tender/procurementMethod |
| Fecha de Firma | contracts/dateSigned |
| Estado BPIN | none |
| Anno BPIN | none |
| Codigo BPIN | none |
| Entidad | buyer/name |
| Codigo PCI | buyer/additionalIdentifiers/id |
| ID del Proceso | none |
| Referencia del Proceso | none |
| ID del Portafolio | ocid |
| Nombre del Procedimiento | tender/title |
| Descripción del Procedimiento | tender/description |
| Fase | none |
| Fecha de Publicacion del Proceso |  |
| Fecha de Ultima Publicación | none |
| Fecha de Publicacion (Fase Planeacion Precalificacion) | none |
| Fecha de Publicacion (Fase Seleccion Precalificacion) | none |
| Fecha de Publicacion (Manifestacion de Interes) | none |
| Fecha de Publicacion (Fase Borrador) | none |
| Fecha de Publicacion (Fase Seleccion) | none |
| Precio Base | tender/value/amount |
| Modalidad de Contratacion | tender/procurementMethod |
| Duracion | tender/contractPeriod/durationInDays |
| Unidad de Duracion | tender/contractPeriod/durationInDays |
| Fecha de Recepcion de Respuestas | tender/tenderPeriod/endDate |
| Fecha de Apertura de Respuesta | none |
| Fecha de Apertura Efectiva | tender/awardPeriod/startDate |
| Ciudad de la Unidad de Negocio | none |
| Nombre de la Unidad de Negocio | none |
| Proveedores Invitados | none |
| Proveedores con Invitacion Directa | none |
| Visualizaciones del Procedimiento | none |
| Proveedores que Manifestaron Interes | none |
| Respuestas al Procedimiento | none |
| Respuestas Externas | none |
| Conteo de Respuestas a Ofertas | none |
| Proveedores Unicos con Respuestas | tender/numberOfTenderers |
| Numero de Lotes | none |
| Estado del Procedimiento | tender/status |
| ID Estado del Procedimiento | none |
| Adjudicado | none |
| ID Adjudicacion | awards/id |
| CodigoProveedor | awards/suppliers/additionalIdentifiers/id |
| Fecha Adjudicacion | award/date |
| Valor Total Adjudicacion | award/value/amount |
| Nombre del Adjudicador | none |
| Nombre del Proveedor Adjudicado | awards/suppliers/name |
| NIT del Proveedor Adjudicado | awards/suppliers/identifier/id |
| Codigo Principal de Categoria | tender/items/classification/id |
| Estado de Apertura del Proceso | none |
| Subtipo de Contrato | none |
| Categorias Adicionales | tender/items/additionalClassifications/id |
| EsPostconflicto | none |
| CodigoBPIN | none |
| AnnoBPIN | none |
| EstadoBPIN | none |
| URLProceso | tender/documents/url |