



Guide to collect, publish & visualize COVID-19 procurement data

This guide describes how to collect, publish and visualize open data about COVID-19 emergency procurement using the Open Contracting Data Standard.

Collecting data	2
What do users want to know about COVID-19 procurement?	2
What data should be published to monitor COVID-19 procurement?	3
How to collect data?	9
Google Form	9
Spreadsheet	10
OpenContractR	11
Contrataciones Abiertas tool	11
Publishing the data	12
Visualizing the data	13
Examples	13
More resources	14
Annex: What is the Open Contracting Data Standard?	14

Collecting data

This guide assumes you need to collect new data, rather than extract data from existing databases. If you already have structured procurement data and want to publish it, please skip ahead to the next section. If you want to use published OCDS data (or otherwise well structured procurement data) to identify contracting processes related to COVID-19, see our [guidance on monitoring COVID-19 emergency procurement](#).

What do users want to know about COVID-19 procurement?

Before you start collecting data, it is good practice to first understand how that data will be used. Will this data be used to improve procurement planning and coordination? Will it be used to detect fraud and corruption? Will it be used to track delivery and performance? These different objectives will have different requirements on which pieces of information should be collected and how they should be structured.

Here are the most common objectives we have seen for using COVID-19 procurement data.

- 1. Number and value of emergency procedures.** During this pandemic governments around the world have authorised emergency procedures, where normal rules can be circumvented, in order to buy fast. However, these procedures must remain public, open and transparent. Users interested in monitoring COVID-19 procurement should be able to know how many emergency procedures are, which entities have used them and how much money has been spent.
- 2. The items being purchased, their price and quantities.** How has the price of face masks and ventilators changed over time? Are suppliers selling the same item at different prices? How does the price for respirators or medicines compare to other countries? What are the most common items entities are buying? Are there entities buying for a higher price? These questions can be answered publishing disaggregated data about the items that are being purchased with their unit prices. Below we recommend how item data fields can be disclosed with their respective classification scheme (such as CPV or UNSPSC), unit measures, descriptions, quantities and values.

3. **Who are the suppliers?** It is key to know who is supplying goods and services for the emergency and how many contracts and value have been awarded to each, so it is important to disclose the name and identifier of the suppliers, and if possible, information about their location, country, scale and legal representative.
4. **Tracking the process.** Disclosing information about the different stages of the process, allows users to track a contracting procedure from tender, or even planning, to implementation, this can include the status of the process, the dates of each stage, the different values (expected value and actual value awarded) and the locations and status of the delivery of the contract. This is helpful to know, for instance, how many tenders were unsuccessful due to lack of suppliers, how fast are tenders being awarded or when and where were the items delivered.

What data should be published to monitor COVID-19 procurement?

While we encourage publishers to disclose as much information as possible ([see all available fields here](#)), the following table describes the most essential pieces of procurement information to collect in order to meet the above objectives. The table lists the title, description and path for each field and why each field is important for users. The fields are segmented by the different stages of the contracting process.

ALL STAGES			
Title	Description	Path	Use case
Contracting process identifier	A unique identifier for the contracting process. In OCDS this is composed of an ocid prefix and an identifier for the contracting process.	ocid	An unique identifier for the process is needed to follow the same process across the different stages
Buyer name	A buyer is an entity whose budget will be used to pay for goods, works or services related to a contract. This may be different from the procuring entity who may be specified in the tender data.	buyer/name	To identify the buyer. For instance calculate which entities are procuring during the COVID-19 emergency
Buyer organization identifier	The identifier of the organization	buyer/id	
1. PLANNING			

Title	Description	Path	Use case
Procurement rationale	The rationale for the procurement provided in free text. More detail can be provided in an attached document.	planning/rationale	
Budget source reserved for contracting process	A short free text description of the budget source. May be used to provide the title of the budget line, or the programme used to fund this project.	planning/budget/description	During the crisis, funds to address the emergency can come from multiple sources. These fields are useful to identify the source of the budget and its amount.
Budget amount	The value reserved in the budget for this contracting process.	planning/budget/amount/amount	
Documents related to the planning process	Documents related to the planning process. It can be published with a short description of the document and a direct link to the document or attachment. See the document type codelist for details.	planning/document/description planning/document/url	Since COVID-19 related processes might use an exceptional procurement method, documents justifying the process can be published.

2. TENDER

Title	Description	Path	Use case
Tender title	A title for this tender. This will often be used by applications as a headline to attract interest, and to help analysts understand the nature of this procurement.	tender/title	These can be used to do text searches to identify particular tenders, or items procured.
Tender description	A summary description of the tender. Descriptions should be short and easy to read.	tender/description	
Procurement method	The procurement method used.	tender/procurementMethod	Useful to identify if the process is open, limited, selective or direct.
Procurement method rationale	Rationale for the chosen procurement method. This is especially important to provide a justification in the case of limited tenders or direct awards.	tender/procurementMethodRationale	Since most of the COVID-19 tenders will use an emergency or exceptional procedure, this can be added in this field. For instance, Paraguay used this field to identify all COVID-19 tenders.
Tender status	The current status of the tender.	tender/status	Useful to identify if

			tenders are active, completed or cancelled.
Items to be procured	The goods and services to be purchased, broken into line items wherever possible. Items should not be duplicated, but the quantity specified instead. Also they should include the classification scheme used (like CPV, UNSPSC) and their id. In addition, additional classification schemes can be used.	tender/items/description tender/items/classification/scheme tender/items/classification/id tender/items/additionalClassifications	One of the most relevant use cases related to COVID-19 is price comparison among items needed for the emergency (masks, respirators, cleaning products, etc). Item classification schemes, quantities and unit prices are needed for this task.
Item prices and quantities	The number of units to be provided and the monetary value of a single unit.	tender/items/quantity tender/items/unit/value/amount	
Main procurement category	The primary category describing the main object of this contracting process (works, goods, services)	tender/mainProcurementCategory	Relevant to identify the different categories of processes that are used.
Award criteria	The award criteria for the procurement (for instance price, cost, quality)	tender/awardCriteria	
Tender value	The total upper estimated value of the procurement.	tender/value/amount	Useful to identify the total amount of the tenders and if there are changes in the total value during the different stages of the process.
Tender period	The period when the tender is open for submissions. The end date is the closing date for tender submissions. It can be disclosed as a single variable of the duration of this period in days, or publishing the start and end date of the tender.	tender/tenderperiod/startDate tender/tenderperiod/endDate tender/tenderperiod/durationInDays	These fields are useful to analyse the duration of the processes or to calculate red flags related to duration times.
Number of tenderers	The number of parties who submit a bid. This can be disclosed as a variable with the number of bids, or publishing as well the name and identifiers of the bidders.	tender/numberOfTenderers tender/tenderers/id tender/tenderers/name	Useful to analyse competition.
Documents and	All documents and attachments	tender/documents	

attachments related to the tender	related to the tender, including any notices. Common documents include official legal notices of tender, technical specifications, evaluation criteria, and, as a tender process progresses, clarifications and replies to queries. See the document type codelist for details.		
-----------------------------------	---	--	--

3. AWARD

Title	Description	Path	Use case
Award id	The identifier for this award. It must be unique	award/id	
Award title	Award title	award/title	These can be used to do text searches to identify particular awards or items procured.
Award description	Award description	award/description	
Award status	The current status of the award	award/status	Useful to identify if awards are active, completed or cancelled.
Award date	The date of the contract award. This is usually the date on which a decision to award was made.	award/date	Useful to analyse duration times.
Award value	The total value of this award. In the case of a framework contract this may be the total estimated lifetime value, or maximum value, of the agreement. There may be more than one award per procurement.	award/value/amount	Useful to identify the total amount of the awards and if there are changes compared to the tender value, or estimated budget.
Award suppliers	The suppliers awarded this award. If different suppliers have been awarded different items or values, these should be split into separate award blocks. The address and country of the supplier can also be included	award/suppliers/id award/suppliers/name award/supplier/address/region award/supplier/address/countryName	Identifying the suppliers providing the goods and services during the emergency is one of the most relevant use cases. This data can also be linked to other sources, such as beneficial ownership.
Award items	The goods and services awarded in this award, broken into line items wherever possible. Items should not be duplicated, but the	award/items/description award/items/classification/scheme	One of the most relevant use cases related to COVID-19 is price comparison among items

	quantity specified instead. Also they should include the classification scheme used (like CPV, UNSPSC) and their id.	award/items/classification/scheme award/items/additionalClassifications	needed for the emergency (masks, respirators, cleaning products, etc). Item classification schemes, quantities and unit prices are needed for this task.
Item prices and quantities	The number of units to be provided and the monetary value of a single unit.	award/items/quantity award/items/unit/value/amount	

4. CONTRACT

Title	Description	Path	Use case
Contract id	The identifier for this contract. It must be unique	contract/id	
Contract title	Contract title	contract/title	These can be used to do text searches to identify particular contracts or items procured.
Contract description	Contract description	contract/description	
Contract status	The current status of the contract	contract/status	Useful to identify if contracts are active, completed or cancelled.
Contract period	The start and end date for the contract. It can be disclosed as a single variable of the duration of this period in days, or publishing the start and end date of the tender.	contract/period/startDate contract/period/endDate contract/period/durationInDays	These fields are useful to analyse the duration of the processes or to calculate red flags related to duration times.
Contract date signed	The date the contract was signed. In the case of multiple signatures, the date of the last signature.	contract/dateSigned	
Contract value	The total value of the contract	contract/value/amount	Useful to identify the total amount of the contracts and if there are changes compared to the tender or award values, or the estimated budget.
Contract documents	All documents and attachments related to the contract, including any notices. Common documents include the signed contract, contract notices. See the document type codelist for details.	contract/documents	

5. IMPLEMENTATION

Title	Description	Path	Use case
-------	-------------	------	----------

Transactions	A list of the spending transactions made against this contract. This can include fields such as the date and value of spending transactions against the contract, the payer and payee.	implementation/transactions/date implementation/transactions/value implementation/transactions/payer implementation/transactions/payee	To analyse payments to suppliers.
Status of contract implementation milestones	Milestones related to the contract implementation, for instance delivery of the goods and services.	See full list of milestones fields .	Useful to analyse timeliness of the delivery of the contract.
Documents	This can include documents or reports related to the implementation phase, such as evaluation reports.	implementation/documents	

How to collect data?

If the above information is mostly on paper or in unstructured electronic documents, there are several options to begin quickly collecting data that will be automatically structured according to the Open Contracting Data Standard (maximizing its potential for analysis and visualization).

Google Form

We have developed a [data collection form](#) for partners to use and adapt to their needs.

Data from the form is copied to a Google Sheet which applies the structure and formatting required for OCDS conformance.

Data entered using the form can be checked and converted using the [OCDS Data Review Tool](#) and published in either spreadsheet or JSON format.

Consider using the form to collect data if:

- You don't have capacity to develop or install a software tool
- Your users have access to reliable internet connections
- Your users are unfamiliar with spreadsheets

- Data entry will be done by many different users
- You want to minimize the work required to collate data

Currently the form includes the fields recommended for publication in the **tender** and **buyer** sections of OCDS according to this guide. The OCDS Helpdesk can provide support to help you extend and adapt the form to suit your needs.

Read more about using and customizing the form in the [resource guide](#). The OCDS helpdesk can also provide guidance on using the form to collect data and support to analyse the data you collect.

Spreadsheet

	A	B	AX	BA	BB
1	Use the + and - symbols above to	expand and collapse groups of data entry columns			
2	Section	Fixed and calculated values	Contracting process metadata	Buyer	
3	# OCDS field path		ocId	Buyer	buyer / Id
4	Title		Open Contracting ID	Buyer	Organization ID
5	Description		A globally unique identifier for this Open Contracting Process. Composed of an ocid prefix and an identifier for the contracting process. For more information see the Open Contracting Identifier guidance.	A buyer is an entity whose budget will be used to pay for goods, works or services related to a contract. This may be different from the procuring entity who may be specified in the tender data.	The id of the party being referenced. This must match the id of an entry in the parties section.
6	Guidance	You do not need to enter any data in this section. Values in this section are either fixed or calculated automatically using formulae.	An unique identifier for the process is needed to follow the same process across the different stages.	To identify the buyer. For instance calculate which entities are procuring during the COVID-19 emergency.	Enter an identifier for the buyer
7	Example		occb-123456-abc		001
8	Data				
9					
10					
11					
12					
13					
14					
15					
16					

We have developed a [data collection spreadsheet](#) for partners to use and adapt to their needs. The template is available in Google Sheets and for offline use in Microsoft Excel.

Data is entered directly into the template which applies the structure and formatting required for OCDS conformance.

Data entered the template can be checked and converted using the [OCDS Data Review Tool](#) and published in either spreadsheet or JSON format.

Consider using the spreadsheet template to collect data if:

- You don't have capacity to develop or install a software tool
- You need to collect data without access to an internet connection
- Your users are familiar with using spreadsheets
- Data entry will be done by a small number of users
- You have capacity to collate data entered in multiple spreadsheets

The template includes all of the fields recommended for publication in this guide.

The template includes [instructions](#) for how to enter data and how to customize the template to suit your needs. Read more about developing spreadsheet templates in our blog series on [prototyping OCDS data using spreadsheets](#).

The OCDS Helpdesk can provide:

- Guidance on using the template to collect data
- Help to extend or adapt the template to meet your requirements
- Support to analyse the data that you collect.

OpenContractR

[OpenContractR](#) is a WordPress plugin for collecting and publishing OCDS data.

The plugin adds an interface for entering data, a contracts search function, charts and visualization and an OCDS format JSON API.

OpenContractR can be added to a new or existing WordPress site. There are many WordPress hosting providers to choose from if you do not already use WordPress.

Consider using OpenContractR if:

- You already have a Wordpress website, or have the capacity to set one up
- Your users have access to reliable internet connections
- Data entry will be done by many different users
- You want to minimize the work required to collate data
- You want users to be able to edit or update already entered data
- You want an online search interface for your data

Read more about OpenContractR in its [introduction](#). If you're interested in using OpenContractR please get in touch with the OCDS Helpdesk.

Contrataciones Abiertas tool

[Contrataciones Abiertas](#) is a tool developed by the National Digital Strategy Coordination of the Presidency of the Republic of Mexico and improved by The National Institute of Transparency, Access to Information and Protection of Personal Data (INAI in Spanish) and it is made up of two main modules:

- Information capture module
- Visualization module

The objective of the tool is to be able to follow up the contracting processes, in a structured way, using and producing OCDS data.

Consider to use Contrataciones Abiertas if:

- You have the resources and technical capacity to [set up the tool](#)
- Data entry will be done by different users
- You want to validate your data before publication
- You want to minimize the work required to collate and publish data
- You want a [dashboard and visualizations](#) of your data
- Spanish is your (and your users') main language

The National Authority of Transparency and Information Access of Panama is using Contrataciones Abiertas to collect and publish emergency data.

The tool is open source and is documented in Spanish [here](#). You can also find an introduction to the tool in [our blog](#).

Publishing the data

However you choose to collect and structure your data, we recommend publishing it online under an [open licence](#) so that others can make use of it.

It is best practice to provide data in multiple formats, so that as many users as possible can use the data without first having to transform it to their preferred format. In OCDS terms, this means [publishing both structured JSON data and tabular CSV or spreadsheet data](#).

Where resources allow, it is also best practice to provide multiple access methods for your data, so that both humans and machines can access it easily. In OCDS terms, this means [providing both bulk downloads and an API](#).

If you collected your data using spreadsheets, then the easiest option is to simply collate the data into a single spreadsheet for publication.

If you collected your data using another tool, then this may already provide options to publish data via bulk files or API.

Consider how you will make it easy for users to discover the data you have published. For example, by publishing it on an existing procurement portal, your organization's website, or an open data portal.

If you would like more detailed support with publishing your Covid-19 emergency procurement data, please contact the [OCDS Helpdesk](#).

Visualizing the data

In addition to publishing data, visualizations make data easier to interpret and dashboards and portals allow less technical users to explore the data. Get inspired by the [examples](#) of emergency procurement portals and dashboards and remember to keep in mind [what users want to know about COVID-19 procurement](#) when deciding what visualizations to prioritize.

If you collected your data in a spreadsheet, you can consider using a tool like [Google Data Studio](#) to create a public dashboard based on your data. You can also check out our learning labs on [getting and exploring OCDS data with Google Sheets](#) and [advanced OCDS analysis with Excel](#).

If you collected your data using a tool which generates OCDS JSON data, check out our guides on [using Kibana to visualize OCDS data](#) and [analyzing open contracting data in R](#).

If you need support to visualize your COVID-19 procurement data, please contact the [OCDS Helpdesk](#).

Examples

Check out these examples of collecting, publishing and visualizing data on COVID-19 emergency procurement.

- [Ukraine](#) added a new procurement method type to their Prozorro system to track COVID-19 procurement. This makes it possible to filter the existing dashboards in their business intelligence tool (bi.prozorro.org, developed and operated by Transparency International Ukraine) to report on COVID-19 related emergency procurement.
- [Moldova](#) launched a portal that gives a general overview of all COVID-19 related tenders in the healthcare sector, with information about the suppliers, goods, quantities, values and even unit prices. Data is collected by spreadsheet and the portal is based on Google Data Studio and Google Sites.
- [Ecuador](#) provides an emergency procurement dashboard with information about contracts, suppliers, procuring entities and unit prices. The dashboard uses data on emergency procurement from the national procurement system, but does not specify which contracting processes relate to COVID-19 specifically.

- [Paraguay](#) added a specific field to its procurement system to identify emergency procurement related to COVID-19 and published a new [dashboard](#) to track COVID-19 procurement procedures from planning to implementation. The data is also structured in OCDS and accessible through an API. Paraguay also implemented an [Android](#) and [IOS](#) mobile applications to get notifications related to COVID-19 purchases.

More resources

You can visit our dedicated [COVID-19 page](#) on our website to explore other resources related to good practices and recommendations. For guidance on other procurement indicators you can check our [Red flags guide](#) and [procurement indicators document](#). If you have any questions related to data use or the Open Contracting Data Standard, please contact us at data@open-contracting.org

Annex: What is the Open Contracting Data Standard?

Public procurement can be divided into five different stages, that include planning, tender, award, contract and implementation. Along these steps, different types of information, data and documents can be disclosed, to allow potential users to analyse the data for different purposes.

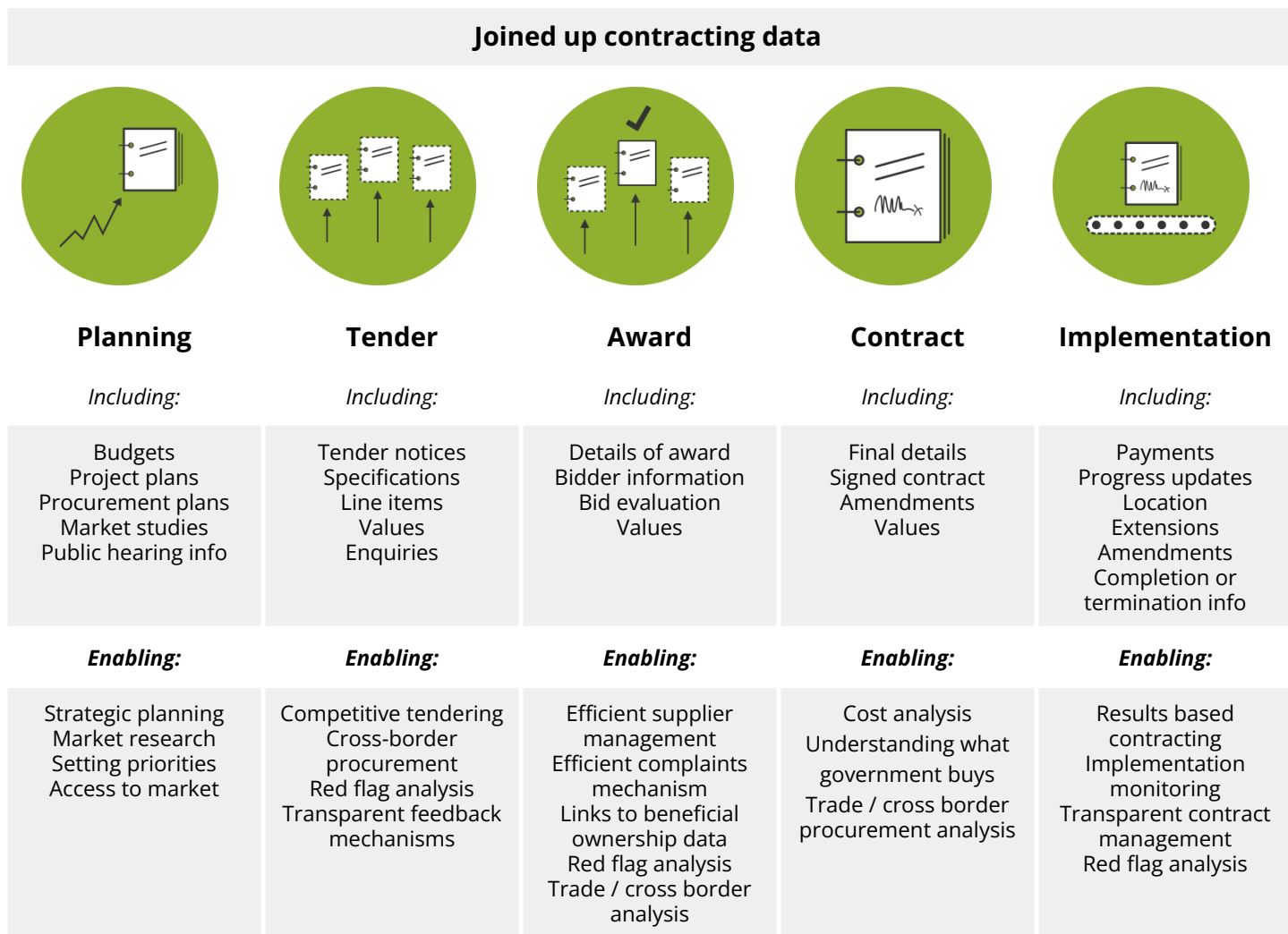
The [Open Contracting Data Standard \(OCDS\)](#), is a free, non-proprietary open data standard for public contracting, being implemented [around the world](#).

The OCDS enables disclosure of data and documents at all stages of the contracting process by defining a common data model. OCDS provides:

- A set of recommended data fields and documents to disclose;
- A common structured JSON data model;
- An approach to regular publication of information on all contracting processes;
- Guidance and tools to support implementation; and
- A free global [Helpdesk](#).

At the heart of OCDS is the idea that it should be possible to follow a contracting process from planning and tender, through to award and implementation. The data made available at each stage described in the diagram below should be usable by, and useful to, key stakeholders, including businesses, citizens and government itself.

Even if you are not yet an OCDS publisher, this structure can help you identify what data you have available in your system and what fields could be disclosed.



About the Open Contracting Partnership

The Open Contracting Partnership is a silo-busting collaboration across governments, businesses, civil society, and technologists to open up and transform government contracting worldwide. We bring open data and open government together to make sure public money is spent openly, fairly and effectively.

data@open-contracting.org | @opencontracting | www.open-contracting.org

This work is licensed under a Creative Commons Attribution 4.0 International License