



FIELD AND INDICATOR ANALYSIS

Version 7:

Rapid Assessment
&

Field and Indicator Analysis for eTenderPublication,
North West Department of Health and
Gauteng Province Procurement Portals

20 November 2020





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Introduction

1. Introduction

Corruption Watch, in partnership with Transparency International, have embarked on a project called Open Contracting for Health, the aim of which is to advocate for greater transparency in health procurement processes. This research, conducted by Open Cities Lab, forms part of this project. The scope of work is as follows:

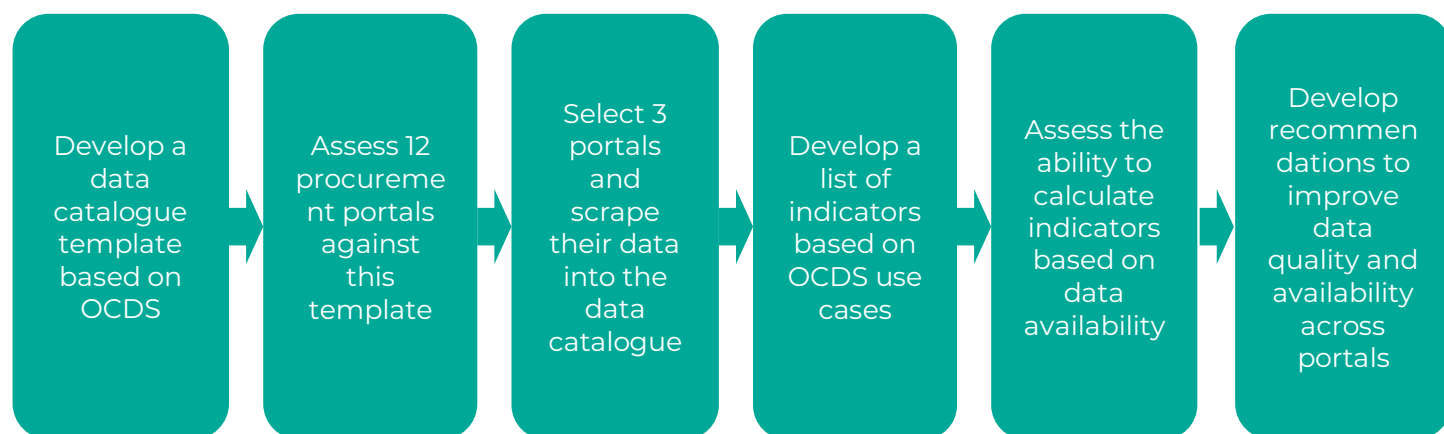
- Conducting a rapid assessment of national and provincial health procurement portals, assessing the availability of information on the portals (3 national portals and 9 provincial portals were selected for the rapid assessment).
- Selection of 3 portals for additional in-depth technical review, including:
 - Scraping and development of a data catalogue using [Open Contracting Data Standards](#)
 - Analysis to determine which procurement health indicators are possible using the available fields and data.
 - Recommendations based on the above analysis including what additional fields should be included and what interventions should be prioritised by portal owners for improved procurement processes.
 - Analysis on overlap and peculiarities of data on the portals when compared to each other.

The three portals selected for these deep dives were the [eTenders Publication Portal](#), the [North West Department of Health Website](#) and the [Gauteng Provincial Government Tender Information Portal](#).

The remainder of this report discusses the methodology used when conducting the scope of work, and the findings from the eTenders, North West and Gauteng procurement portal technical reviews. The annexure includes the findings of the rapid assessment and detail on the technical reviews.

1.1. Methodology

The methodology is summarised below but is described in detail in [Annexure 1: Methodology](#). The figure below describes the journey taken to develop this report.



The steps are summarised below:

- **Development of a data catalogue template:** The data catalogue is based on [Open Contracting Data Standards](#) (OCDS). OCDS is a growing data standard used in procurement that promotes transparency through publishing information from the procurement planning stage through to the implementation stage, in a format that can be easily extracted and analysed. The OCDS was used as a base but was adjusted in the data catalogue to suit the South African context and project needs. The data catalogue template can be found [here](#).
- **Rapid assessment:** Fields available across 12 portals (3 national, 9 provincial) were mapped against the data catalogue fields, using the catalogue template. The portals were scored using various criteria such as geographic and procurement stage coverage. A summary of the rapid assessment results can be found in [Annexure 3: Rapid Assessment](#). The detailed assessment and scoring can be found [here](#).
- **Deep dives (selection and scraping):** Based on the scoring and additional criteria such as ease of scraping, 3 portals were chosen for deep dives. A deep dive includes scraping data within the portal¹, entering that data into the data catalogue, and performing an indicator analysis. A detailed methodology on how each portal was scraped is available in the annexure. The final merged data catalogue is available [here](#). The three deep dives are:
 - eTenderPublication: Data was extracted 29 May- 2 June 2020
 - Gauteng Province: Data was extracted 14-18 September 2020
 - North West DoH: Data was extracted on 22-23 July 2020

¹ It should be noted that a decision was taken not to scrape PDFs as part of this project due to time and resource constraints

- **Indicator list:** Indicators are the result of a combination of fields and are calculated to provide insight into the procurement process, for example, the potential for corruption. A list of indicators was sourced from the available literature, consolidated and adjusted based on the local context. The indicator list is available in [Annexure 8](#).
- **Deep dives (indicator analysis):** For each portal, the indicators were categorised according to whether they can be calculated using data available in HTML (in the data catalogue) or PDF, or if there is insufficient information. The fields and data quality were both considered when categorising. 3 indicators per portal were calculated as a showcase of what can be achieved. The indicator assessment is available [here](#).
- **Recommendations:** Given the indicator assessment, experience of developing the data catalogue and insights from international research on user requirements, recommendations were developed for each portal. These should be tested with local South African stakeholders on release of this report. Recommendations were prioritised based on impact (** = strongest positive impact on the intended outcomes of OCDS), ease of implementation (effort level) and dependency (actions that can only occur once other actions have taken place). Consolidated challenges and recommendations for all portals and the procurement ecosystem were also developed.

The following 3 sections describe the findings and recommendations from the deep dives: eTenders, North West DoH and Gauteng Province. Further detail on each deep dive respectively can be found in annexures [5](#), [6](#) and [7](#).

eTenderPublication Portal

This section describes a summary of findings from the scraping process and from the indicator assessment, the results of 3 example indicators and recommendations for the eTenderPublication Portal (eTenders). Annexure 3 contains:

- A list of all data catalogue fields categorised according to availability,
- A list of 79 indicators with commentary on their ability to be calculated.
- Additional tables describing the 31 indicators that can be calculated, including the formula for calculation and how to interpret the results.

The list of fields and indicators with commentary are available in spreadsheet format [here](#).

1.2. Summary of Findings

eTenders comprises tender listings across all sectors, however, health-related listings were separated in order to conduct the assessment. The following number of health-related entries were available on the portal:

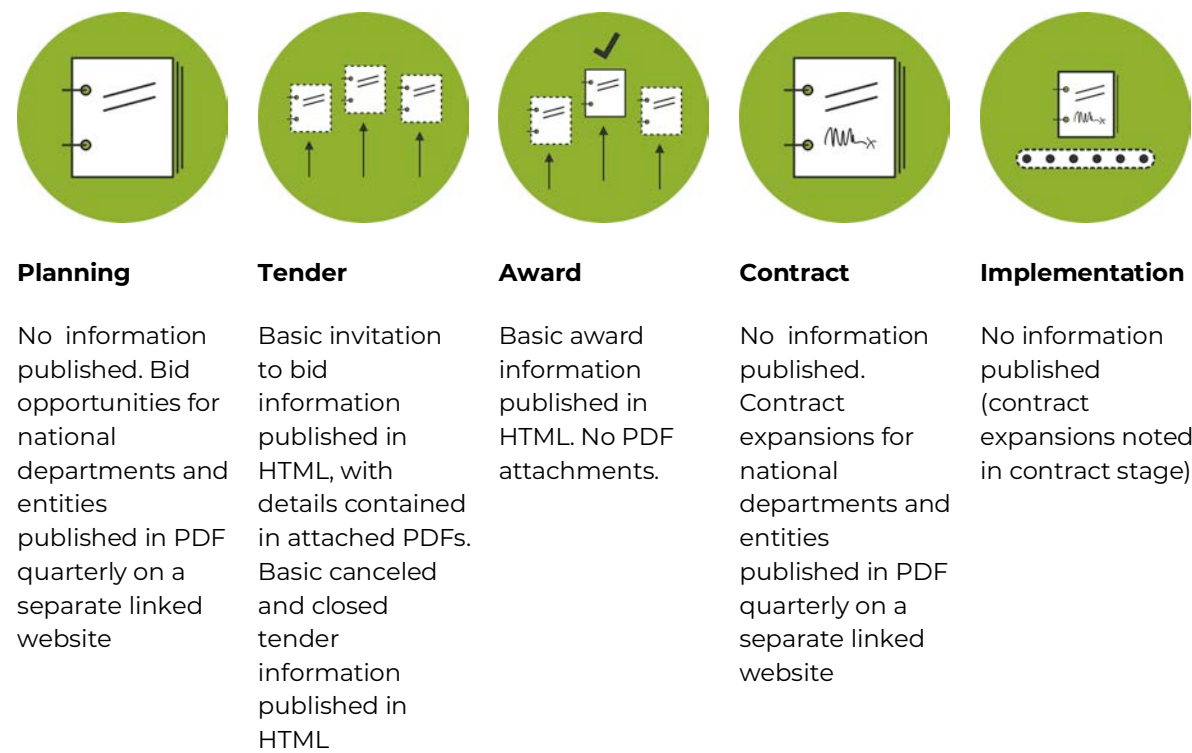
- 78 advertised tenders (from 2019-12-06 to 2020-06-02)²
- 128 awarded tenders (no date published)
- 1270 closed tenders (from 2015-04-03 to 2020-05-19) 128 of these also occur in awarded tenders.
- 195 cancelled tenders (no date published)
- 96 unique suppliers (awards release)
- 39 unique procuring entities, across all levels of government (tender advert release only).
- 36 unique categories

The recurring procuring entities were:	The recurring categories were:
Eskom (11)	Supplies: Medical (1153)
Free State Department of Health (7)	Human Health Activities (207)
National Health Laboratory Service (7)	Human Health and Social Work Activities (106)
South African Medical Research Council (6)	Services: Professional (49)
City of Tshwane (4)	Construction (39)
Denel (3)	Services: General (26)
Council for Medical Schemes (2)	Supplies: General (16)
Department of Health (2)	Services: Functional (14)
eThekweni Metro (2)	
Free State Department of Education (2)	
Independent Development Trust (2)	
PetroSA (2)	
Tswelopele Local Municipality (2)	

13 of 78 tender adverts held the keywords covid and corona in the tender description and special conditions field. 3 of the closed tenders were covid-related. 3 of the cancelled tenders were covid-related.

² These are the tenders currently advertised, as opposed to all tenders that have ever been advertised. Once the tender advert period is closed, the record moves into the tenders closed section of the portal.

The below diagram (adapted from the OCDS [technical assessment template](#)) summarises the coverage of information published on eTenders.



eTenders contains approximately 54 fields in HTML and 60 in PDF across the planning, tender, awards and contract stages. Approximately 111 fields included in the OCDS schema are not published, in addition, there is no information on the implementation stage available. Data within many of the available fields in HTML is inaccurate and incomplete. As a result, of the 69 indicators identified, only 7 can be easily calculated using data obtained from a once-off scrape of the portal. An additional 32 indicators could be calculated with difficulty through both digital and manual scraping of the portal and PDFs over time. No data exists for 30 of the indicators. The table below shows how the indicators that could and couldn't be calculated are split between the use cases. It is important to note that no value for money indicators can be calculated as this is one of the primary use cases for government stakeholders.

Number of Indicators Per Use Case				
	Total	Data Catalogue	PDF	Missing
Collusion	9	5	0	4
Efficiency of Procurement Process	11	2	0	9
Fraud	7	5	0	2
Market Opportunity / Competitiveness	9	6	0	3
Process Rigging	18	8	5	5
Public Integrity	4	0	2	2
Reporting & Descriptive Analytics	4	4	0	0
Transparency & Disclosure of Procurement Process	11	5	2	4
Value for Money	6	0	0	6
Total	79	35	9	35

Note: The total is more than the actual number of indicators (69) because some indicators cover more than one use case.

Given the varying quality of the data entered onto eTenders, it is difficult to ascertain to what extent National Treasury regulations on the type of information that must be published and associated timelines are being complied with. However, a preliminary assessment of a sample of tender and award information showed that only the tender description, number and end date is being consistently completed at the advert stage and only the tender description, number and supplier name is being consistently completed at the award stage (see the [example indicators](#) for further detail on this).

A summary of the challenges with the way the data is entered onto the portal, the structure of the portal and the breadth of information is included below:

All stages:

- Data on the portal as it currently exists is often incomplete and inaccurate. For example, varying information is published under the 'unsuccessful bidder' section, including the procuring entity name, and often this section is left blank. Sometimes telephone numbers were filled in where contract price should be, or contract prices were filled in where the director's names should be. This could be a result of the way the information is being ingested into the portal (further research on the process by which tender information gets into the portal is required).
- There are duplicate entries across all stages.
- Procuring entity and supplier names are not standardised across tenders.
- Dates of milestones and dates of publishing notices on the milestones are rarely published, for example, the date the award decision was made and the date the award notice was published are not included in the awards release.
- Information on a contracting procedure (single tender) is not available throughout the procurement stages (from planning through to implementation). There is no way to link the various stages because, even where there is information published, the tender id is not

always published. This results in large gaps in information, for example, essential information, such as the procuring entity, is lost as soon as the tender advert is pulled down from the portal.

- Bid opportunities, extensions, deviations, blacklisted suppliers and price lists are not available on the eTenders Portal but are rather published in PDF on the Office of the Chief Procurement Officer's website.
- Standard PDFs released with every tender do not have standard naming protocol and structure, for example, SBD documents have varying names and are sometimes attached as individual PDFs or as a consolidated set.
- Information on items being procured is difficult to find at the tender advert stage and is not published at the awards, contract or implementation stages. This is critical information for tracking procurement performance and potential corruption.
- Complaints and their responses are not published.

Planning stage:

- Only future bid opportunities from national entities are published in PDF on the Office of the Chief Procurement Officer's (OCPO) website and they do not have an identifier, therefore, it is not possible to track their implementation. No other planning information is published.

Tender stage:

- It is legislated that tenderer information is published within 10 days of the bid opening but this is not being done. This includes tenderers' name, contact details, itemised bid price, SMME status, ownership status (local / foreign) and BBBEE level.
- Closed and canceled tenders have very little information provided, making it difficult to link information between the tender and other stages, which is required to calculate numerous indicators.

Award stage:

- The date of completion of award is required by legislation but is not being published.
- Sole source awards (deviations) are published in PDF on the OCPO's website quarterly instead of on eTenders together with competitive awards.
- Tenderers are published with the awards release, separated as 'successful' and 'unsuccessful' bidders, however, 'unsuccessful bidder' information is poorly completed (46% of the sample of awards were missing all information on successful bidders).
- Disqualification of tenderers is not noted.

Contract stage:

- Contract information is not published (except for transversal contracts and amendments which are available on the OCPO's website in PDF format).

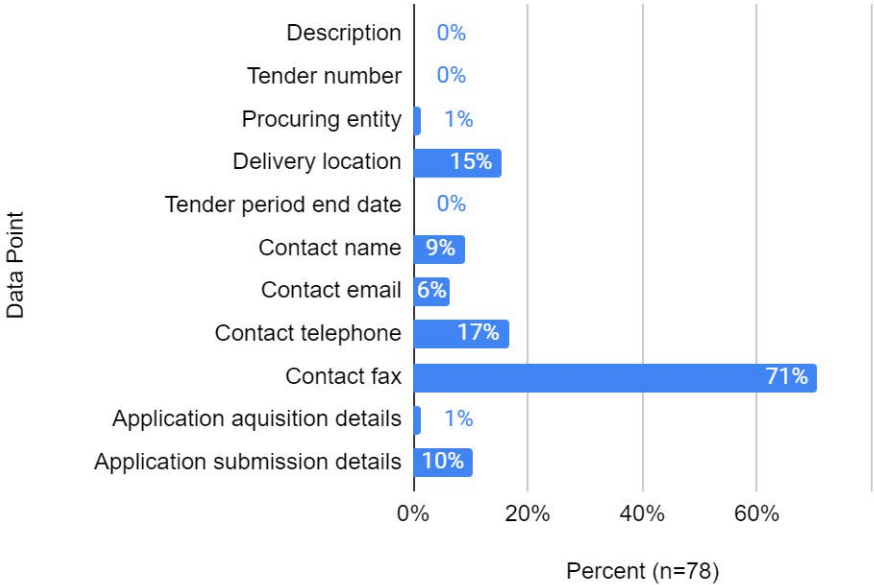
Implementation stage:

- Currently no implementation information is published.

1.3. Example Indicators

Analysis for 3 indicators was completed as an example. All 3 are indicators of transparency in the procurement process. The results are included below. It should be noted that there are numerous issues with the accuracy and reliability of the data captured on eTenders and therefore, the data within the catalogue. While all attempts have been made to clean the data, these inaccuracies will impact on the indicator results to varying degrees. These issues are described in more detail in the methodology section and should be considered when assessing indicators.

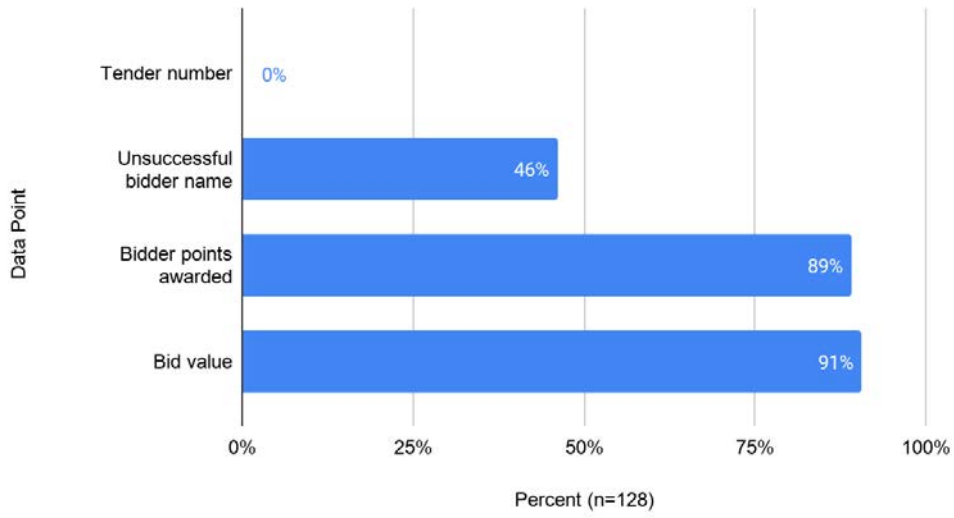
% of tender adverts that don't publish basic tender information

Description	National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include: (a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)																								
Considerations	(i) the bid documents published cannot be ascertained via the data catalogue, however, all other requirements can be. Can be calculated per year for all categories and procuring entities, or segmented.																								
Formula	<p>For each tender information category, for all tender adverts:</p> $\text{percent of tenders} = \frac{\sum \text{count}(\text{false})}{\text{Total number of tenders advertised}} * 100$																								
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.																								
Results	<p>% of tender adverts that don't publish basic tender information</p>  <table border="1"> <thead> <tr> <th>Data Point</th> <th>Percent (n=78)</th> </tr> </thead> <tbody> <tr> <td>Description</td> <td>0%</td> </tr> <tr> <td>Tender number</td> <td>0%</td> </tr> <tr> <td>Procuring entity</td> <td>1%</td> </tr> <tr> <td>Delivery location</td> <td>15%</td> </tr> <tr> <td>Tender period end date</td> <td>0%</td> </tr> <tr> <td>Contact name</td> <td>9%</td> </tr> <tr> <td>Contact email</td> <td>6%</td> </tr> <tr> <td>Contact telephone</td> <td>17%</td> </tr> <tr> <td>Contact fax</td> <td>71%</td> </tr> <tr> <td>Application acquisition details</td> <td>1%</td> </tr> <tr> <td>Application submission details</td> <td>10%</td> </tr> </tbody> </table>	Data Point	Percent (n=78)	Description	0%	Tender number	0%	Procuring entity	1%	Delivery location	15%	Tender period end date	0%	Contact name	9%	Contact email	6%	Contact telephone	17%	Contact fax	71%	Application acquisition details	1%	Application submission details	10%
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% of tender awards that don't publish basic award information

Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 4) dictates that certain basic award information must be published on eTenders for national and provincial department procurement within 7 days of the bid being awarded. This includes:</p> <p>(a) Contract description and bid number; (b) Names of the successful bidder(s) and preference points claimed; (c) Contract price(s), if possible; (d) Contract period; (e) Names of Directors; and (f) Date of completion/award</p>																
Considerations	<p>(f) the date of award is not published on eTenders. Note: Successful bids includes bids concluded through a limited bidding process (i.e includes deviations and unsolicited bids) (this cannot be calculated using the data catalogue which only accounts for open tender processes).</p>																
Formula	<p>For each award information category, for all award notices:</p> $\text{percent of awards} = \frac{\sum \text{count}(\text{false})}{\text{Total number of award notices}} * 100$																
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Supplier director names	23%																

% of tenders that don't publish basic unsuccessful bidder information

Effort	Medium										
Description	In respect of unsuccessful bidders the following information must be included: (a) Names of the unsuccessful bidder(s); (b) Preference points claimed; and (c) Contract price(s), if possible (National Treasury Instruction 4.3).										
Considerations	Calculating this indicator is complicated by the fact that there is no tenderer notice published on eTenders. Tenderers are published as part of the awards release separated into 2 tables (successful bidder and unsuccessful bidders). These tables have been merged into 'bids' to get an understanding of all tenderers but often points claimed and contract price is published for the supplier only, or no unsuccessful bidders are published at all, making the data very difficult to analyse as one set.										
Formula	<p>For each award information category, for all award notices:</p> $\text{percent of awards} = \frac{\sum \text{count}(\text{false})}{\text{Total number of award notices}} * 100$										
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation.										
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Data Point	Percent										
Tender number	0%										
Unsuccessful bidder name	46%										
Bidder points awarded	89%										
Bid value	91%										

1.4. Recommendations

Given the indicator analysis and insights from international research on user requirements, the following recommendations have been developed. These should be tested with local South African stakeholders on release of this report. These are provided in order of priority, based on impact (***) = strongest positive impact on the intended outcomes of OCDS), ease of implementation (effort level) and dependency (actions that can only occur once other actions have taken place).

Impact ratings were derived from the use cases described in [Annexure 2.1](#) (User Group Requirements). The actions that will allow for the calculation of indicators that are most important to most users (and use cases) are given the highest impact rating. These include value for money, red flag indicators (corruption/fraud), competition, transparency and service delivery monitoring. The mapping of fields to users and use cases can be seen in the table on page 60. With regard to **ease of implementation**, it was assumed that the 'quick win' actions are to improve the quality of data that is already on the portal, as this would just require improving existing processes. These actions are based on the challenges with the data described in [Section 2.1](#) (Summary of Findings). Actions that require stakeholder engagement and publishing existing data are considered to require medium effort as they would likely need to be projectised and require time and planning. High effort activities are those that require collecting and publishing new data on the portal, requiring changes to the current structure of the eTenders portal and processes and, in some cases, a likely change in the culture of information sharing in procurement.

Finally, it was important to recognise that certain actions would need to take place before others. This is indicated by the **dependency** column. Activity groups 1 (improving data quality) and 2 (engagement on indicators) can occur immediately and concurrently, however, activity group 3 (publishing existing indicators) should only occur once the data quality is improved and stakeholders have been engaged with to confirm the needs of stakeholders that have been assumed in this report. High effort activity groups 4 and 5, which consist of expanding the available data, should only occur once the 'quick win' items have been completed so as not to over-extend resources and delay impact unnecessarily.

No.	Recommendation	Impact	Effort Level	Dependency
1	Improve the quality and completeness of the fields that are already included on the portal and required by legislation	* * *	Low	None
1.1	Ensure all party (procuring entity, supplier and tenderer) details are completed, including amounts and preference points	* * *	Low	None
1.2	Develop a standard way of indicating when an unsuccessful bidder (tenderer) was disqualified and publish with tenderer data	* *	Low	None
1.3	Implement standardisation of party names (potentially through the use of unique identifiers)	* * *	Medium	None
1.4	Publish dates with each release on the portal (preferably date of decision and date of publishing)	* * *	Low	None
1.5	Carry tender advert information through into the tender closed and cancelled sections to create a robust archive of basic information	* * *	Low	None
1.6	Publish the accurate tender number with each release on the portal	* * *	Low	None
1.7	Build quality assurance into the process of uploading data onto the portal to avoid issues such as duplicated tenders	* * *	Low	None
1.8	Standardise the naming and compilation of PDFs linked to tender adverts	* *	Low	None
2	Engage on data and indicators required by user groups	* *	Medium	None
2.1	Validate and prioritise the existing fields and indicators and identify new indicators with the community of stakeholders	* *	Medium	None
2.2	Describe the full life cycle of the indicators including who will measure the indicators, how frequently and what are the baselines	* * *	Medium	None
2.3	Provide unique identifiers for each indicator for easy reference as you iterate on the indicators	*	Low	None
2.4	Determine the best way to communicate the indicators to users (through this engagement)	* * *	Medium	None (should coincide with 2.1)
3	Publish available data and indicators in an accessible format (include historical/trend data)	* * *	Medium	1 and 2
3.1	Publish a dashboard of descriptive indicators using the data described in recommendation (1) and methodology discovered in recommendation (2)	* * *	Medium	1 and 2 (especially, 2.4)
3.2	Publish data in machine readable format such as csv.	* * *	Medium	1
3.3	Build in a feedback mechanism whereby users of indicators/data can communicate with publishers	* * *	Medium	3.1 and 3.2
4	Publish the data needed for critical use cases in an accessible format	* * *	High	1
4.1	Publish item information in an accessible format at the planning (cost estimate/limits/guidelines), tender (bids received) and award/contract (price) stages	* * *	High	1

4.2	Publish competitive and single source awards in the awards section on the portal and note the procurement method	* * *	High	1
4.3	Publish enterprise size (SMME) and locality (local/international) with tenderer release	* *	Medium	1
4.4	Publish tender and implementation milestones (estimated and actual date and cost of delivery per contracting procedure)	* * *	High	1
4.5	Publish procurement plans and contracts, including amendments and cancellations, on the portal in real time	* * *	High	1
4.6	Publish sub-contractor details	* *	Medium	1
5	Aim for maximum transparency	* *	High	1, 3 and 4
5.1	Publish information in real time for each of the 5 stages of the procurement process for each contracting procedure linked with a unique identifier (open contracting identifier), including planning budget and dates, status, tender adverts, bid receipts, awards, contracts and implementation details	* *	High	1 and 4
5.2	Publish complaints and responses, and any instances of corruption and related investigations	* *	High	None
5.3	Publish the results of all indicators	* *	High	1, 3 and 4

The following section describes the results of the North West DoH Website deep-dive.

02

North West
DoH Website

2. North West DoH Website

Tenders issued by the North West DoH are listed on the [North West Department of Health Website](#) (North West DoH website). This section describes a summary of findings from the development of the data catalogue and from the indicator assessment, the results of 3 example indicators and recommendations for the North West DoH website. [Annexure 6: North West DoH website](#) contains:

- A list of all data catalogue fields categorised according to availability,
- A list of 79 indicators with commentary on their ability to be calculated.
- Additional tables describing the 3 indicators that can be calculated, including the formula for calculation and how to interpret the results.

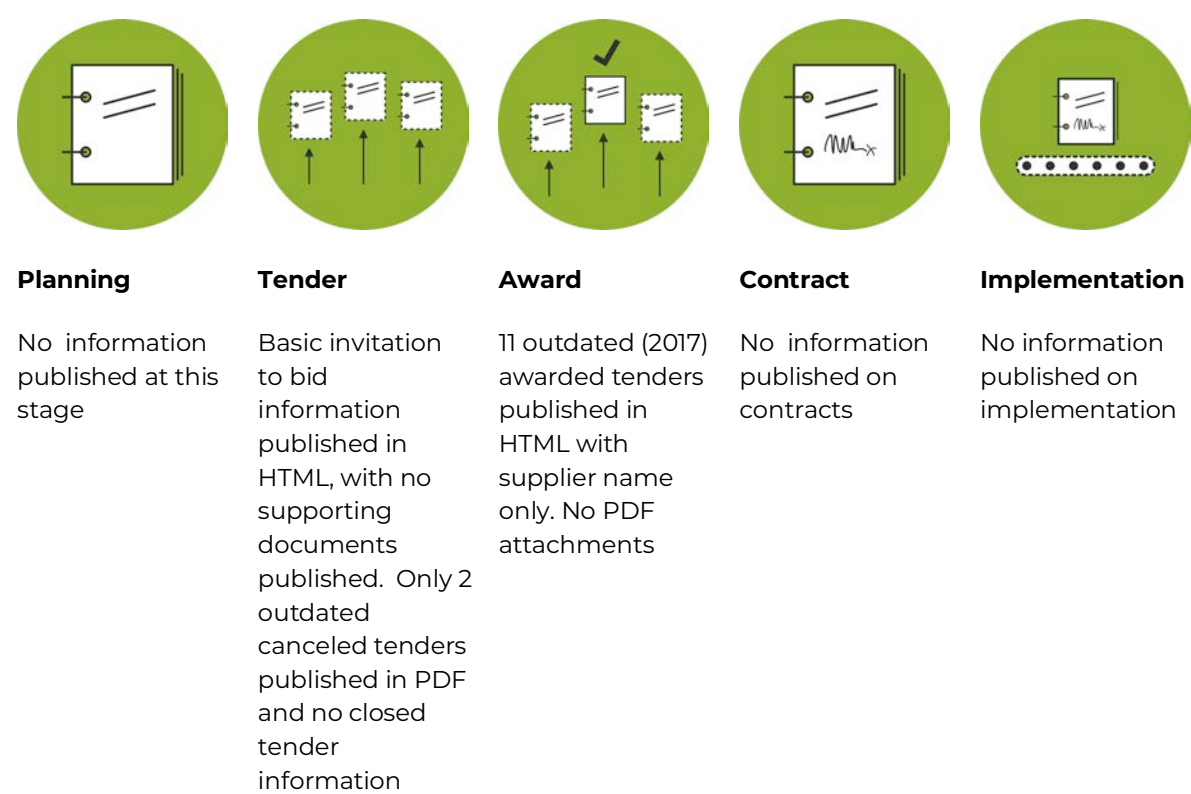
The list of fields and indicators with commentary are available in spreadsheet format [here](#).

2.1. Summary of Findings

The North West DoH website only publishes information on tenders that are from North West Department of Health and all of the tender IDs and awards IDs are prefaced with NWDOH - even on the eTenders portal, so this is a quick way to identify North West tenders. The data on this portal is well organised and presented - in that the right data is in the right fields and it all makes sense. As at 23 July 2020, the following number of entries were available in HTML for scraping:

- 47 advertised tenders (from 10/08/2018 - 08/07/2020)
- 11 awarded tenders (March 2017 - August 2017 but they were all published on the portal on 22/01/2018). There were 6 unique suppliers.
- 27 tenders were categorised under 'general'. Other recurring categories included 'electrical equipment' (6), 'medical equipment' (3), 'accommodation' (2), 'maintenance' (2), and 'medical' (1)
- There were no Covid related tenders or awards published on this portal.

The below diagram (adapted from the OCDS [technical assessment template](#)) summarises the coverage of information published on the North West DoH website.



The NorthWest Portal contains approximately 26 fields in HTML at the tender stage. There are only 11 outdated awarded tenders published in HTML and so these fields have been recorded as missing for the purpose of this report. The PDF fields published on this portal have also been recorded as missing as they are very limited and outdated and so it would be inaccurate to use this information. Approximately 193 fields are not published, in addition there is no information on the planning, implementation and contract stages available. Only 3 indicators can be easily calculated using data obtained from a once-off scrape of the tender listings on the website. The table below shows how the indicators that could and couldn't be calculated are split between the use cases. The table highlights the dire lack of information on the website.

Number of Indicators Per Use Case				
	Total	Data Catalogue	PDF	Missing
Collusion	9	0	0	9
Efficiency of Procurement Process	11	1	0	10
Fraud	7	0	0	7
Market Opportunity / Competitiveness	9	0	0	9
Process Rigging	18	1	0	17
Public Integrity	4	0	0	4
Reporting & Descriptive Analytics	4	0	0	4
Transparency & Disclosure of Procurement Process	11	1	0	10
Value for Money	6	0	0	6
Total	79	3	0	76

Note: The total is more than the actual number of indicators (69) because some indicators cover more than one use case.

The challenges with the way the data is entered onto the portal, the structure of the portal and the breadth of information are included below:

All stages:

- The main challenge, as highlighted above, is the fact that only information at the tender stage is published regularly (it should be noted that all basic information is published for 100% of tender adverts). Awards stopped being published in 2017 and bidder lists are only published for a few tenders.
- Analysis of the example indicators ([see below](#)) shows an inefficient procurement process where no tenders are allowed to be submitted electronically and all tenders are open for more than the recommended 21 days (with a mean of 37 days).

Tender stage:

- There was one error noticed with the closing date of a tender - the year had been incorrectly entered, this was verified by the fact that the same tender appeared in the eTenders portal.
- There are a few duplicates in the tender IDs and this is because some tenders are readvertised under the same tender ID if there were not enough applicants.
- Only basic information is provided on the tender advert in HTML - there are no PDFs attached to the advert but rather it is advised that the tender details be obtained from eTenders or in person from the Department offices. This is especially problematic when one considers that very few of the tenders published on the North West DoH website are available on eTenders (see [comparative analysis](#) below), which means that most documents are only available in person from the offices which is a barrier to market openness as some bidders may not be able to collect in person.

- National Treasury Instruction Note on Enhancing Compliance Monitoring and Improving Transparency and Accountability in Supply Chain Management 3.2.1 requires departments to publish the names of bidders in an advertised competitive bid – and where practical- the total price and any preference claimed by the bidders. Bidder lists have been published in PDF but not for every tender advert and only the names of bidders are published.
- No closed tenders and only 2 cancelled tenders have been published in PDF and with very little information provided.

Award stage:

- Only 11 awarded tenders have been published from January to December 2017.
- The information published on these awarded tenders is not extensive. It only includes the award ID, bid description, suppliers name and the bid price.

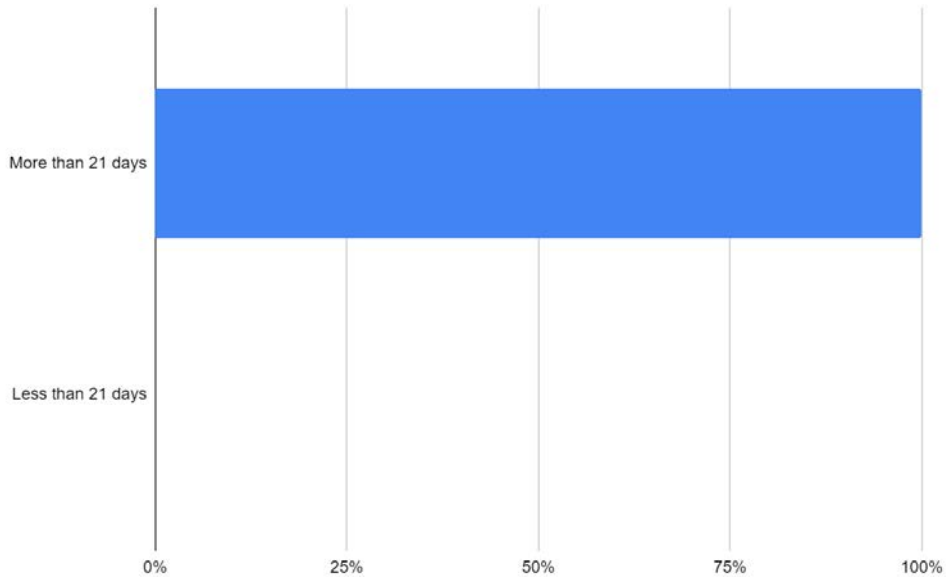
2.2. Example Indicators

Only 3 indicators could be calculated given the information available on the website. Analysis for all 3 of the indicators was completed. The results are included below.

Percentage of tenders using electronic bidding

Description	The percentage of tenders that allow for bids to be submitted electronically.						
Considerations	None						
Formula	$\text{percent of tenders} = \frac{\sum \text{number of tenders using electronic bidding}}{\text{Total number of tender adverts}} * 100$						
Interpretation	Allowing electronic submissions can result in more efficient bid processing and reduces the cost (time and money) placed on bidders.						
Results	<p>% of tenders using electronic or in-person bidding</p> <table border="1"> <caption>Data for % of tenders using electronic or in-person bidding</caption> <thead> <tr> <th>Bidding Method</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Electronic Bids</td> <td>~0%</td> </tr> <tr> <td>In-Person Bids</td> <td>100%</td> </tr> </tbody> </table>	Bidding Method	Percentage	Electronic Bids	~0%	In-Person Bids	100%
Bidding Method	Percentage						
Electronic Bids	~0%						
In-Person Bids	100%						

Tendering period less or more than 21 days

Description	Number of days between the tender start date and its closing date.
Considerations	National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3. Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.
Formula	$\text{duration} = \text{Tender period end date} - \text{Tender period start date}$ $\text{mean}(\text{duration})$ $\text{median}(\text{duration})$
Interpretation	Allowing an unreasonably short time to respond to requests for bids can reduce competition. A tender period of more than 21 days may signal inefficiencies.
Results	<p>Tendering period less or more than 21 days</p>  <p>Mean: 37 Median: 35</p>

% of tender adverts that don't publish basic tender information

Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include:</p> <p>(a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)</p> <p>The legal requirement to publish this data is for the eTenderPublication Portal only but it is still a useful descriptive indicator for the NorthWest portal. Especially since there are tenders published on the NorthWest Portal that aren't available on eTenders. Tender document meta-data is not published but it is indicated where the documents can be found (generally eTenders or at the offices).</p>																								
Considerations	(i) the bid documents published cannot be ascertained via the data catalogue, however, all other requirements can be. Can be calculated per year for all categories and procuring entities, or segmented.																								
Formula	<p>For each tender information category, for all tender adverts:</p> $\text{percent of tenders} = \frac{\sum \text{count}(\text{false})}{\text{Total number of tenders advertised}} * 100$																								
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.																								
Results	<p>% of tender adverts that don't publish basic tender information</p> <table border="1"> <thead> <tr> <th>Data Point</th> <th>Percent (n=47)</th> </tr> </thead> <tbody> <tr> <td>Description</td> <td>0%</td> </tr> <tr> <td>Tender number</td> <td>0%</td> </tr> <tr> <td>Procuring entity</td> <td>0%</td> </tr> <tr> <td>Delivery location</td> <td>0%</td> </tr> <tr> <td>Tender period end date</td> <td>0%</td> </tr> <tr> <td>Contact name</td> <td>0%</td> </tr> <tr> <td>Contact email</td> <td>0%</td> </tr> <tr> <td>Contact telephone</td> <td>0%</td> </tr> <tr> <td>Contact fax</td> <td>100%</td> </tr> <tr> <td>Application aquisition details</td> <td>0%</td> </tr> <tr> <td>Application submission details</td> <td>0%</td> </tr> </tbody> </table>	Data Point	Percent (n=47)	Description	0%	Tender number	0%	Procuring entity	0%	Delivery location	0%	Tender period end date	0%	Contact name	0%	Contact email	0%	Contact telephone	0%	Contact fax	100%	Application aquisition details	0%	Application submission details	0%
Data Point	Percent (n=47)																								
Description	0%																								
Tender number	0%																								
Procuring entity	0%																								
Delivery location	0%																								
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Contact email	0%																								
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Contact fax	100%																								
Application aquisition details	0%																								
Application submission details	0%																								

2.3. Comparative Analysis

North West DoH tender information is also published on eTenders portal using the same unique ID. It is therefore possible to compare all tender information published on the NW DoH website with those published on eTenders using the data catalogue. This comparative analysis provides further insights and assists in informing recommendations³.

The following legislation applies to provincial departments and eTenders:

- National Treasury Instruction 1 of 2015/2016 requires bids and awards to be published on eTenders
- National Treasury Instruction 3 of 2015/2016 requires all basic tender information for tenders over R500,000 to be included on eTenders
- National Treasury Instruction 4 of 2015/2016 requires basic information for the awards of all advertised bids to be published on eTenders within 7 days of the award decision. This includes awards for deviations and unsolicited bids.

Tender ID's starting with 'NWDOH' were assumed to be those published by the North West Department of Health. The table below shows that there are 28 NWDOH tenders published on eTenders, mostly under the closed and cancelled categories.

Number of NWDOH IDs on eTenders portal			
eTenders			
awards	advertised	closed	cancelled
1	0	13	14

Of these 28, only 9 were also published on the North West DoH website, as shown in the table below. 6 advertised tenders on the North West DoH website were published under 'closed' on eTenders and 3 were published under 'cancelled' on eTenders. The 1 awarded tender on eTenders was not found on the North West DoH website.

Number of duplicates between North West and eTenders portal					
North West	eTenders				
		awards	advertised	closed	cancelled
	awards	0	0	0	0
	advertised	0	0	6	3

These 9 overlapping tenders were assessed for discrepancies (see the details [here](#)). No discrepancies were found under cancelled tenders, however there are discrepancies under closed tenders with regards to the procurement categories; tender period start and end dates. With regards to the start date discrepancies, the NorthWest website is around 1 to 2 days later than eTenders. The end dates are very different from each other. The closing date for tender NWDOH 07/2019 is incorrectly captured on the NorthWest Portal, however the correct date is on etenders. Some of the tender IDs on the eTenders, come up as re-adverts on the NorthWest Portal - the original advert is not there.

The results of the comparative analysis are surprising. One would expect (1) a larger number of tenders from the North West Department of Health to be published on eTenders (under closed)

³ No further scraping of eTenders was conducted for this analysis which means that there is a time lag that is likely to have impacted on the results in a minor way.

since this covers a 5 year period and it is required by law that all tenders from provincial departments are published on eTenders; and (2) a greater overlap between the 2 portals since one would assume the same process is being followed for both portals, rather than the procurement officer only choosing 1 portal to publish on. A possible contributing factor is that only tenders over R500,000 are being published on eTenders, however, this cannot be confirmed because no robust awards information is published on either portal for the North West Department of Health.

2.4. Recommendations

Given the indicator analysis and insights from international research on user requirements, the following recommendations have been developed. These should be tested with local South African stakeholders on release of this report. These are provided in order of priority, based on impact (***) = strongest positive impact on the intended outcomes of OCDS), ease of implementation (effort level) and dependency (actions that can only occur once other actions have taken place).

Impact ratings were derived from the use cases described in [Annexure 2.1](#) (User Group Requirements). The actions that will allow for the calculation of indicators that are most important to most users (and use cases) are given the highest impact rating. These include value for money, red flag indicators (corruption/fraud), competition, transparency and service delivery monitoring.

Ease of implementation was more difficult to assess for the North West DoH website than for eTenders as most basic information was already on eTenders, allowing for 'quick wins' to be recommended. For the North West DoH website there are fewer 'quick wins' because there is very little information currently on the portal and the existing processes are unknown. It may be that simple changes are required to begin to publish information on the website but this can only be known through engagement. Therefore, most recommendations are considered to require medium effort. High effort activities are those that require publishing information that is beyond the minimum required information.

Finally, it was important to recognise that certain actions would need to take place before others. This is indicated by the **dependency** column. For the North West DoH website, it is recommended that no other activities occur before minimum compliance and transparency is achieved in activity group 1. Also in activity group 1 is a recommendation for the procurement team at the North West Department of Health to consider the usefulness of maintaining tender listings on the website and the place that the website holds relative to the eTenders Portal. Once this is decided, awareness and training can take place in order to ensure consistency in publishing information.

No.	Recommendation	Impact	Effort Level	Dependency
1	Aim for minimum compliance and transparency	***	Medium	None
1.1	Publish award information on the North West DoH website and eTenders (winning bidder company name, contract price, preference points and dates)	***	Medium	None
1.2	Publish bidder information (at least company names) on the North West DoH website within 10 working days of bid closure for all bids	***	Medium	None
1.3	Publish all tender adverts on eTenders	***	Low	None
1.4	Publish SBD documents incl. terms of reference with the tender advert on both the North West DoH website and eTenders	***	Medium	None
1.5	Ensure that closing dates on the North West DoH website match those on eTenders	***	Low	None
1.6	Procuring officers to engage on the benefits of maintaining tender listings on the North West DoH website vs. utilising eTenders (like the Western Cape).	***	Medium	None
1.7	Undertake awareness and training on the benefits of transparency, calculating indicators and OCDS	***	Medium	None
2	Engage on data and indicators required by user groups	**	Medium	1
2.1	Validate and prioritise the existing fields and indicators and identify new indicators with the community of stakeholders	**	Medium	1
2.2	Describe the full life cycle of the indicators including who will measure the indicators, how frequently and what are the baselines	***	Medium	1
2.3	Provide unique identifiers for each indicator for easy reference as you iterate on the indicators	*	Low	1
2.4	Determine the best way to communicate the indicators to users (through this engagement)	***	Medium	1
3	Publish available data and indicators in an accessible format (include historical/trend data)	***	Medium	1 and 2
3.1	Publish a dashboard of descriptive indicators using the data described in (1) and methodology discovered in (2)	***	Medium	1 and 2 (especially, 2.4)
3.2	Publish data in machine readable format such as csv.	***	Medium	1
3.3	Build in a feedback mechanism whereby users of indicators/data can communicate with publishers	***	Medium	3.1 and 3.2

4	Publish the data needed for critical use cases in an accessible format	* * *	High	1
4.1	Expand basic advertised, closed, cancelled, awards and bids information to include all data in the Treasury guidelines, together with IDs and the ability to link listings across phases	* * *	Medium	1
4.2	Publish item information in an accessible format at the planning (cost estimate/limits/guidelines), tender (bids received) and award/contract (price) stages	* * *	High	1
4.3	Publish competitive and single source awards in the awards section on the portal and note the procurement method	* * *	High	1
4.4	Publish enterprise size (SMME) and locality (local/international) with tenderer release	* *	Medium	1
4.5	Publish tender and implementation milestones (estimated and actual date and cost of delivery per contracting procedure)	* * *	High	1
4.6	Publish procurement plans and contracts, including amendments and cancellations, on the portal in real time	* * *	High	1
4.7	Publish sub-contractor details	* *	Medium	1
5	Aim for maximum transparency	* *	High	1, 3 and 4
5.1	Publish information in real time for each of the 5 stages of the procurement process for each contracting procedure linked with a unique identifier (open contracting identifier), including planning budget and dates, status, tender adverts, bid receipts, awards, contracts and implementation details	* *	High	1 and 4
5.2	Publish complaints and responses, and any instances of corruption and related investigations	* *	High	None
5.3	Publish the results of all indicators	* *	High	1, 3 and 4

The following section describes the results of the Gauteng provincial procurement portal deep-dive.

Gauteng Portal

Tenders issued by Gauteng Province are listed on the [Gauteng Provincial Government Tender Information Portal](#) (Gauteng Portal). This section describes a summary of findings from the development of the data catalogue and from the indicator assessment, the results of 3 example indicators and recommendations for the Gauteng Portal. [Annexure 7: Gauteng Portal](#) contains:

- A list of all data catalogue fields categorised according to availability,
- A list of 68 indicators with commentary on their ability to be calculated,
- Additional tables describing the 12 indicators that can be calculated, including the formula for calculation and how to interpret the results.

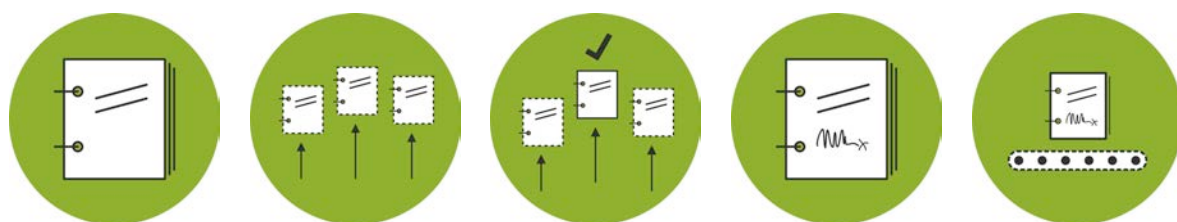
The list of fields and indicators with commentary are available in spreadsheet format [here](#).

2.5. Summary of Findings

The Gauteng Portal only publishes information on tenders that are from the Gauteng Province and all of the tender IDs and awards IDs are prefaced with GT/GDH - even on the eTenders portal, so this is a quick way to identify Gauteng tenders. The data on this portal is presented in both HTML and PDF and not all field names are uniform, which makes some of the data accuracy questionable. As at 14 September 2020, the following number of entries were available in HTML and PDF for scraping:

- 4 advertised tenders (from 06/03/2020 - 11/09/2020)
- 109 awarded tenders (20/12/2009- 06/09/2019)
- 14 cancelled tenders (2015 - 2018)
- 24 closed tenders (20/02/2015 - 20/09/2019)
- There were no Covid related tenders or awards published on this portal, however there is a [COVID-19 Expenditure Disclosure Report](#) published under the awards tab.

The below diagram (adapted from the OCDS [technical assessment template](#)) summarises the coverage of information published on the Gauteng Portal.



Planning

No information published at this stage

Tender

Basic invitation to bid information published in HTML, with supporting documents published in PDF, word and excel. 14 canceled and 24 closed tenders published in HTML

Award

33 awarded tenders published in HTML with PDF attachments and 109 awarded tenders published in PDF

Contract

Contract start and end dates published with PDF awards

Implementation

No information published on implementation

The Gauteng Portal contains approximately 37 fields in HTML at the tender stage.

There are 33 awards published in HTML that run from 2015 to 2019. Only the bid number and title are included in HTML but each of these have detailed bid information attached in the form of PDF documents such as bidder lists. There are also 10 award reports in PDF form that summarise 109 awards published from 2010 to 2020, including supplier, contract value and dates. However these award reports do not have attached PDFs with any extra bid information. According to the date last modified on inspection of the item on the portal, all PDFs up to 2018 were published on 28/11/2019, while 2019 PDFs were published 2/01/2020.

OCL scraped both the HTML awards and PDF report awards, however, only the PDF report awards were included in the data catalogue as the information is more complete and consistent. The individual PDFs attached to the HTML awards weren't scraped, in line with our approach for the other 2 portals. 23 out of 33 awards published in HTML are also published in the PDF reports (10 outstanding⁴). It is unknown as to why not all the awards have been published in HTML and why not all of the HTML awards have been included in the summarised award reports. OCL emailed the portal contact to find out but did not receive a response. It is most likely that this is a case of inconsistent data capturing happening on the portal, however, it could also disguise corruption as it is difficult to calculate award related indicators.

⁴ These 10 HTML awards can be viewed [here](#).

Approximately 155 fields are not published, in addition, there is no information on the planning and implementation stages available.

Only 3 indicators can be calculated using data obtained from a once-off scrape of the tender listings on the website, with an additional 9 possible through continuous scraping of the portal. The table below shows how the indicators that could and couldn't be calculated are split between the use cases. The table highlights the lack of information on the website.

Number of Indicators Per Use Case				
	Total	Data Catalogue	PDF	Missing
Collusion	9	0	0	9
Efficiency of Procurement Process	11	4	1	6
Fraud	7	0	0	7
Market Opportunity / Competitiveness	9	1	0	8
Process Rigging	18	3	1	14
Public Integrity	4	0	0	4
Reporting & Descriptive Analytics	4	1	0	3
Transparency & Disclosure of Procurement Process	11	3	0	8
Value for Money	6	0	0	6
Total	79	12	2	65

Note: The total is more than the actual number of indicators (69) because some indicators cover more than one use case.

The challenges with the way the data is entered onto the portal, the structure of the portal and the breadth of information are included below:

All stages:

- The Gauteng Portal does contain substantial information in document attachments with good continuity between the tender advert, closed and awards releases, however, this is not applied consistently for all contracting procedures.
- Documents released with every tender do not have standard naming protocol and structure and are published in word, excel and PDF form. For example, Pricing Schedule documents have varying names such as Tender Document Section 2.
- Complaints and their responses are not published.
- Bid opportunities, extensions, deviations, blacklisted suppliers and price lists are not available on the Gauteng Portal.

Planning stage:

- No information on planning is published on the portal.

Tender stage:

- Unlike the eTenders Portal and North West DoH Website, basic information is not published in HTML, including submission method and contact points for the tender. The majority of information is published in document attachments.
- National Treasury Instruction Note on Enhancing Compliance Monitoring and Improving Transparency and Accountability in Supply Chain Management 3.2.1 requires departments to publish the names of bidders in an advertised competitive bid – and where practical- the total price and any preference claimed by the bidders. Bidder lists have been published in PDF but not for every tender advert and only the names of bidders are published.

Award stage:

- Awards are published in both HTML (33 entries) and PDF (109 entries), however, the two are not consistent (10 awards published in HTML are not published in PDF).
- For the awards published in PDF, there are several entries where multiple suppliers were awarded a single contract, however, only 1 contract value is stated. In other cases multiple suppliers were awarded but the same contract value is repeated per supplier. It is unclear how much of the contract value is being awarded per supplier.
- The award dates published seem arbitrary and inaccurate for the following reasons:
 - There were differing field names across award PDFs. Awards published from 20/12/2009 to 01/08/2010 are published with an “award date” and then awards published onwards from 13/05/2011 have published an “advert date”.
 - Many of the “award dates” and “advert dates” are after the “contract period start date”, which is nonsensical.
 - According to a sample analysis conducted, the “advert date” doesn’t match the actual advert date in the closed tenders release.
 - It appears that the PDFs were uploaded in 2 batches on 28/11/2019 and 2/01/2020 - these are the true award dates published and reflect a significant delay in publishing information (although improving).
- It seems to be that there is inconsistent data capturing happening on the portal, however, it could also disguise corruption as it is difficult to calculate award related indicators.
- Disqualification of bidders is not noted.
- Unsuccessful bidder information is not published.

Contract stage:

- Only the contract start and end date has been published in the awards report PDFs.

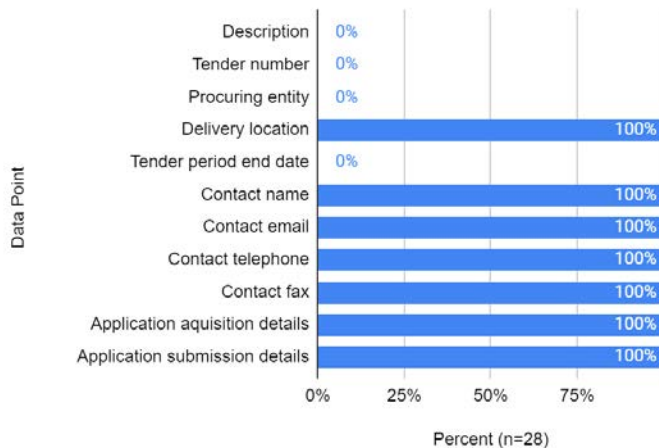
2.6. Example Indicators

Out of the 12 indicators that could be calculated given the information available on the website, 3 were chosen for an indicator analysis. The results are included below.

Tendering period less or more than 21 days

Description	Number of days between the tender start date and its closing date.								
Considerations	National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3. Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.								
Formula	$\text{duration} = \text{Tender period end date} - \text{Tender period start date}$ $\text{mean}(\text{duration})$ $\text{median}(\text{duration})$								
Interpretation	Allowing an unreasonably short time to respond to requests for bids can reduce competition. A tender period of more than 21 days may signal inefficiencies.								
Results	<p>Tendering period less or more than 21 days</p> <table border="1"> <thead> <tr> <th>Tendering Period</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>More than 21 days</td> <td>24%</td> </tr> <tr> <td>Less than 21 days</td> <td>21%</td> </tr> <tr> <td>21 days exactly</td> <td>55%</td> </tr> </tbody> </table> <p>Percent (n=28)</p> <p>Mean: 25 Median: 21</p>	Tendering Period	Percent	More than 21 days	24%	Less than 21 days	21%	21 days exactly	55%
Tendering Period	Percent								
More than 21 days	24%								
Less than 21 days	21%								
21 days exactly	55%								

% of tender adverts that don't publish basic tender information

Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include:</p> <p>(a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)</p> <p>The legal requirement to publish this data is for the eTenderPublication Portal only but it is still a useful descriptive indicator for the Gauteng portal.</p>																								
Considerations	Some information is published in HTML, with the rest being published in PDF. The links can be followed on a case by case basis to different documents attached to the different tenders.																								
Formula	<p>For each tender information category, for all tender adverts:</p> $\text{percent of tenders} = \frac{\sum \text{count}(\text{false})}{\text{Total number of tenders advertised}} * 100$																								
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.																								
Results	<p>% of tender adverts that don't publish basic tender information</p>  <table border="1"> <thead> <tr> <th>Data Point</th> <th>Percent (n=28)</th> </tr> </thead> <tbody> <tr> <td>Description</td> <td>0%</td> </tr> <tr> <td>Tender number</td> <td>0%</td> </tr> <tr> <td>Procuring entity</td> <td>0%</td> </tr> <tr> <td>Delivery location</td> <td>100%</td> </tr> <tr> <td>Tender period end date</td> <td>0%</td> </tr> <tr> <td>Contact name</td> <td>100%</td> </tr> <tr> <td>Contact email</td> <td>100%</td> </tr> <tr> <td>Contact telephone</td> <td>100%</td> </tr> <tr> <td>Contact fax</td> <td>100%</td> </tr> <tr> <td>Application acquisition details</td> <td>100%</td> </tr> <tr> <td>Application submission details</td> <td>100%</td> </tr> </tbody> </table> <p>*It should be noted that the outstanding data points are published in PDF attachments.</p>	Data Point	Percent (n=28)	Description	0%	Tender number	0%	Procuring entity	0%	Delivery location	100%	Tender period end date	0%	Contact name	100%	Contact email	100%	Contact telephone	100%	Contact fax	100%	Application acquisition details	100%	Application submission details	100%
Data Point	Percent (n=28)																								
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Contact name	100%																								
Contact email	100%																								
Contact telephone	100%																								
Contact fax	100%																								
Application acquisition details	100%																								
Application submission details	100%																								

% of tender awards that don't publish basic award information

Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 4) dictates that certain basic award information must be published on eTenders for national and provincial department procurement within 7 days of the bid being awarded. This includes:</p> <p>(a) Contract description and bid number; (b) Names of the successful bidder(s) and preference points claimed; (c) Contract price(s), if possible; (d) Contract period; (e) Names of Directors; and (f) Date of completion/award</p> <p>The legal requirement to publish this data is for the eTenderPublication Portal only but it is still a useful descriptive indicator for the Gauteng portal.</p>																
Considerations	Note: Successful bids includes bids concluded through a limited bidding process (i.e includes deviations and unsolicited bids) (this cannot be calculated using the data catalogue which only accounts for open tender processes).																
Formula	<p>For each award information category, for all award notices:</p> $\text{count where awards information category} = \text{false}$ $\text{percent of awards} = \frac{\sum \text{count}(\text{false})}{\text{Total number of award notices}} * 100$																
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation.																
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2.7. Comparative Analysis

Gauteng tender information is also published on eTenders portal using the same unique ID. It is therefore possible to compare all tender information published on the Gauteng portal with those published on eTenders using the data catalogue. This comparative analysis provides further insights and assists in informing recommendations⁵.

The following legislation applies to provincial departments and eTenders:

- National Treasury Instruction 1 of 2015/2016 requires bids and awards to be published on eTenders
- National Treasury Instruction 3 of 2015/2016 requires all basic tender information for tenders over R500,000 to be included on eTenders
- National Treasury Instruction 4 of 2015/2016 requires basic information for the awards of all advertised bids to be published on eTenders within 7 days of the award decision. This includes awards for deviations and unsolicited bids.

Tender ID's starting with 'GT/GDH' were assumed to be those published by the Gauteng Portal. The table below shows that there are 45 GT/GDH tenders published on eTenders, mostly under the closed and cancelled categories.

Number of Gauteng IDs on eTenders portal			
awards	advertised	closed	cancelled
10	1	23	11

Of these 45, only 36 were also published on the Gauteng Portal, as shown in the table below. 9 awarded tenders on the Gauteng Portal were also found under 'awards' on etenders and another 9 awards were published under 'closed' on eTenders. Out of the 2 advertised tenders on the Gauteng Portal, one was found under 'advertised' and one under 'closed' on etenders. Out of the 11 closed tenders on the Gauteng Portal, 3 were found under 'awards', 7 under 'closed' and one under 'cancelled' on eTenders. 5 cancelled tenders on the Gauteng Portal were also published under 'cancelled' on eTenders.

Number of duplicates between Gauteng and eTenders portal					
Gauteng	eTenders				
		awards	advertised	closed	cancelled
	awards	9	0	9	0
	advertised	0	1	1	0
	closed	3	0	7	1
	cancelled	0	0	0	5

⁵ No further scraping of eTenders was conducted for this analysis which means that there is a time lag that is likely to have impacted on the results in a minor way.

These 36 overlapping tenders were assessed for discrepancies. Looking at the duplicate records between the Gauteng Portal and the eTenders Portal, most records are the same between portals. There is one award, GT/GDH/001/2019 where it seems that the data capturer made an error in one of the award contract values. It was found that in some cases where there are multiple awards, the Gauteng portal publishes the whole list of suppliers awarded whereas the eTenders Portal only publishes the first supplier awarded on the list. There is also one case where the award was published twice on the Gauteng Portal and only once on the eTenders Portal which may be a duplication error - GT/GDH/045/2017. Given the inconsistency and uncertainty about data, it is not possible to determine whether there is corruption or simply failure to capture the data accurately.

2.8. Recommendations

Given the indicator analysis and insights from international research on user requirements, the following recommendations have been developed. These should be tested with local South African stakeholders on release of this report. These are provided in order of priority, based on impact (** = strongest positive impact on the intended outcomes of OCDS), ease of implementation (effort level) and dependency (actions that can only occur once other actions have taken place).

Impact ratings were derived from the use cases described in [Annexure 2.1](#) (User Group Requirements). The actions that will allow for the calculation of indicators that are most important to most users (and use cases) are given the highest impact rating. These include value for money, red flag indicators (corruption/fraud), competition, transparency and service delivery monitoring.

Ease of implementation was more difficult to assess for the Gauteng Portal than for eTenders as most basic information was already on eTenders, allowing for 'quick wins' to be recommended. For the Gauteng Portal there are fewer 'quick wins' because there is very little information currently on the portal and the existing processes are unknown. It may be that simple changes are required to begin to publish information on the website but this can only be known through engagement. Therefore, most recommendations are considered to require medium effort. High effort activities are those that require publishing information that is beyond the minimum required information.

Finally, it was important to recognise that certain actions would need to take place before others. This is indicated by the **dependency** column. For the Gauteng Portal, it is recommended that no other activities occur before minimum compliance and transparency is achieved in activity group 1. Also in activity group 1 is a recommendation for the procurement team at the Gauteng Province to consider the usefulness of maintaining tender listings on the website and the place that the website holds relative to the eTenders Portal. Once this is decided, awareness and training can take place in order to ensure consistency in publishing information.

No.	Recommendation	Impact	Effort Level	Dependency
1	Aim for minimum compliance and transparency	***	Medium	None
1.1	Ensure all award information is accurate and consistent (particularly, date and contract value information)	***	Low	None
1.2	Choose whether awards are going to be published in PDF or HTML or both in the short term and stick to this method of releasing award data	***	Low	None
1.3	Consistently publish all basic tender advert, award and unsuccessful bidder information for all contracting procedures. This can be done as document attachments in the short term but should look to moving to HTML in the medium term.	***	Medium	None
1.4	Publish bidder information (at least company names) within 10 working days of bid closure for all bids	***	Medium	None
1.5	Publish document attachments consistently across all releases and develop a naming protocol for document attachments	***	Medium	None
1.6	Publish all tender adverts and awards on eTenders	***	Medium	None
1.7	Investigate the reasons for the inconsistency of information published across the Gauteng Portal and eTenders Portal	***	Medium	None
1.8	Procuring officers to engage on the benefits of maintaining tender listings on the Gauteng Portal vs. utilising eTenders (like the Western Cape).	***	Medium	None
1.9	Undertake awareness and training on the benefits of transparency, calculating indicators and OCDS	***	Medium	1.8
2	Engage on data and indicators required by user groups	**	Medium	1
2.1	Validate and prioritise the existing fields and indicators and identify new indicators with the community of stakeholders	**	Medium	1
2.2	Describe the full life cycle of the indicators including who will measure the indicators, how frequently and what are the baselines	***	Medium	1
2.3	Provide unique identifiers for each indicator for easy reference as you iterate on the indicators	*	Low	1
2.4	Determine the best way to communicate the indicators to users (through this engagement)	***	Medium	1
3	Publish available data and indicators in an accessible format (include historical/trend data)	***	Medium	1 and 2
3.1	Publish a dashboard of descriptive indicators using the data described in (1) and methodology discovered in (2)	***	Medium	1 and 2 (especially, 2.4)
3.2	Publish data in machine readable format such as csv.	***	Medium	1
3.3	Build in a feedback mechanism whereby users of indicators/data can communicate with publishers	***	Medium	3.1 and 3.2
4	Publish the data needed for critical use cases in an	***	High	1

	accessible format			
4.1	Expand basic advertised, closed, cancelled, awards and bids information to include all data in the Treasury guidelines, together with IDs and the ability to link listings across phases	* * *	Medium	1
4.2	Publish item information in an accessible format at the planning (cost estimate/limits/guidelines), tender (bids received) and award/contract (price) stages	* * *	High	1
4.3	Publish competitive and single source awards in the awards section on the portal and note the procurement method	* * *	High	1
4.4	Publish enterprise size (SMME) and locality (local/international) with tenderer release	* *	Medium	1
4.5	Publish tender and implementation milestones (estimated and actual date and cost of delivery per contracting procedure)	* * *	High	1
4.6	Publish procurement plans and contracts, including amendments and cancellations, on the portal in real time	* * *	High	1
4.7	Publish sub-contractor details	* *	Medium	1
5	Aim for maximum transparency	* *	High	1, 3 and 4
5.1	Publish information in real time for each of the 5 stages of the procurement process for each contracting procedure linked with a unique identifier (open contracting identifier), including planning budget and dates, status, tender adverts, bid receipts, awards, contracts and implementation details	* *	High	1 and 4
5.2	Publish complaints and responses, and any instances of corruption and related investigations	* *	High	None
5.3	Publish the results of all indicators	* *	High	1, 3 and 4



03

51%

Consolidated Findings and Recommendations

3. Consolidated Findings and Recommendations

This chapter considers the key challenges highlighted in the previous 3 sections and provides recommendations for both provincial and national procurement portals.

3.1. Challenges

The exercise of reviewing and scraping 3 procurement portals, developing a data catalogue, and assessing procurement indicators unearthed the lack of quality, complete data available on public health-related procurement portals in South Africa. The review found that out of 69 potential indicators for eTenders, only 7 could be calculated using the data catalogue developed, and out of 67 potential indicators for provincial portals⁶, only 3 could be calculated per portal. More detail on the availability of information per portal is provided below.

	eTenders	NW DoH	Gauteng
Complete, quality data exists in the data catalogue	7	3	3
Incomplete data, of varying quality, exists in the data catalogue	24	0	9
Data exists in PDF / attachments only	8	1	2
Data is not published	30	63	53
Total number of indicators	69	67	67

The specific challenges leading to the inability to calculate indicators are categorised as data quality, transparency and efficiency, and are reflective of a fairly immature procurement data management system that fails to publish basic information requirements.

⁶ Two indicators relating to procuring entities were not relevant to the provincial portals because there is only 1 procuring entity on the provincial portals.

3.1.1. Data quality and consistency

Data quality across all 3 portals was poor, requiring significant effort to develop the data catalogue and preventing accurate indicator analysis. The following data quality issues were most common:

- Information being captured in the incorrect field, for example, telephone numbers being filled in where contract prices should be (Note: This was particularly true of eTenders. The provincial portals are more organised but also have much less data).
- Duplicate entries.
- Inconsistent naming conventions and typing errors.
- Incorrect or nonsensical dates (especially true for the Gauteng Portal).

In addition to these cross-cutting issues, there were significant issues discovered with the consistency of data across the provincial portals and eTenders. It is legally required by National Treasury Instruction 1, 3 and 4 (2015/16) to publish provincial bids and awards on eTenders, however, very few provincially published tenders are also being published on eTenders and there are some tenders listed on eTenders that aren't listed on the provincial portals.

- For the North West DoH website, there were only 9 common tender listings with eTenders. Furthermore, there were discrepancies between the tender period start and end dates on these listings. There were 19 tenders listed on eTenders that weren't on the North West DoH website, and a similar number of tenders on the North West DoH website that weren't on eTenders.
- For the Gauteng Portal, there were 36 common tender listings (out of 151 scraped). There were fewer discrepancies between the two portals than experienced with the NW DoH, however, it was found that in some cases where there are multiple awards, the Gauteng portal publishes the whole list of suppliers awarded whereas the eTenders Portal only publishes the first supplier awarded on the list.

3.1.2. Transparency and disclosure of information

The second major challenge with the portals is the lack of information published. Transparency is the cornerstone of the OCDS schema for monitoring the procurement system; without it, most use cases such as value for money, are unable to be analysed. Furthermore, in many cases the lack of transparency is illegal, as it does not meet minimum standards set in National Treasury instructions 1, 3 and 4 of 2015/16. For example:

- An analysis of eTenders found that up to 47% of tenders were missing legally required award information such as the value and contract date, and up to 89% were missing legally required unsuccessful bidder information such as bidder name, value and point awarded.
- While 100% of tender adverts on the North West DoH website contained legally required information, little to no awards and unsuccessful bidder information was published.
- On the Gauteng Portal, the majority of tender advert information is only published in PDF, only the description, tender number and supplier name is published consistently for awards, and almost no unsuccessful bidder information is published.

While there is a dearth of information across all 3 portals, in general, eTenders contained more information than the provincial portals. This is reflected by the fact that 35 indicators can be analysed for eTenders, where only 12 and 3 can be analysed for Gauteng and North West DoH respectively. The lack of transparency is experienced through:

- Information not being completed consistently across all contracting procedures even though the fields exist.
- Information that is only available at one stage of the contracting procedure, making it impossible to link a single contracting procedure across stages.
- Information that is being published in PDFs or other attachments only, sometimes on a separate website.
- Information that isn't being published at all, including:
 - Item information
 - Complaints and responses
 - Planning, contracting and implementation information
 - Tenderer information, including disqualifications
 - Sole-source awards

3.1.3. Efficiency of the procurement process

Examples of inefficiency within the procuring process include:

- Delayed publishing of information, which is often illegal, for example, it is legislated that tenderer information is published within 10 days of the bid opening but this is not being done through the respective portals, and award information should be published timeously to allow time to be challenged but awards are often published well after the award decision, especially on the provincial portals (if published at all).
- Most bids can only be submitted in person (100% of bids on the North West DoH website had to be submitted in person), which is inefficient and more costly for the tenderer. Furthermore, several provincial tenders are only available in hard copy from the provincial offices.
- Tenders are often open for longer than 21 days (100% of bids on the North West DoH website and 24% on the Gauteng Provincial portal were open for longer than 21 days).

A major consequence of the above challenges is that corruption via these digital platforms cannot be adequately monitored therefore the chances of corruption occurring are increased. The following recommendations aim to address these challenges and improve monitoring.

3.2. Recommendations

The following recommendations are divided into two sub-sections: recommendations for provincial portals and recommendations for a national portal. They should be read together with the individual portal recommendations in previous sections.

3.2.1. Provincial Portals

It is important to note that provincial portals are publishing significantly less information than eTenders (particularly in HTML), the data quality and consistency is poor and there seems to be confusion and inconsistency regarding what is published on eTenders and what is published on the provincial portal. This is a breach in legislation and is obscuring the procurement process. While only 2 provincial portals were assessed in detail, a rapid assessment of procurement portals for each province (where there were portals), found that the two that were assessed were the most comprehensive, so it can be assumed that those that weren't assessed contain even more challenges. There are two scenarios that should be explored by provinces:

- Scenario 1: Desist from publishing tenders on a provincial portal/website and direct all tenderers to the national portal. Work with the national portal owners to improve the extent and quality of information published (see recommendations for the national portal below).
- Scenario 2: Drastically improve the extent and quality of information published on their portal/website and improve the synergies with the national portal (as required by legislation) (see detailed recommendations for the [North West DoH](#) and [Gauteng](#)).

3.2.2. National Portal

While there are notable shortcomings with eTenders, it is still the most comprehensive and effective procurement portal of the portals considered in the rapid assessment as part of this study. This proves that there is a place for a national portal such as eTenders within the procurement ecosystem. 2 scenarios could be considered:

- Scenario 1: Update eTenders to the level required to meet SA legislation and aim for better transparency in future. Specific portal recommendations for eTenders that are phased appropriately can be found [here](#).
- Scenario 2: Replace eTenders with a new portal (or compliment eTenders with a new health procurement portal) that more easily allows for the implementation of OCDS and more automated processes. In order to decide if this is necessary, a technical assessment of eTenders and the associated data pipeline against OCDS and within the local context will need to take place.

Below are supporting recommendations that are aimed at the procurement ecosystem and could be applied regardless of the scenario selected.

Data quality and efficiency: A limitation to this study was that the processes behind the portals were not considered i.e. the procurement data pipeline and those responsible. It assumed from the nature of the data quality issues on eTenders, that this is still a fairly human-centred, non-automated process. In order to combat data quality concerns, there should be a data ingestion tool, management system and process developed and overseen by the National Treasury, where tender information is handled via digitised processes from the start and stored in a database that is built based on the OCDS schema. The ingestion tool would be designed to be able to fit the data needs. A data ingestion tool would also ensure clean data - validation criteria would be set for fields like dates and money amounts. If provincial portals were still deemed necessary, data could then be directed to provincial portals via this tool and this would ensure consistency across portals. For full transparency, even the application process should be strictly electronic.

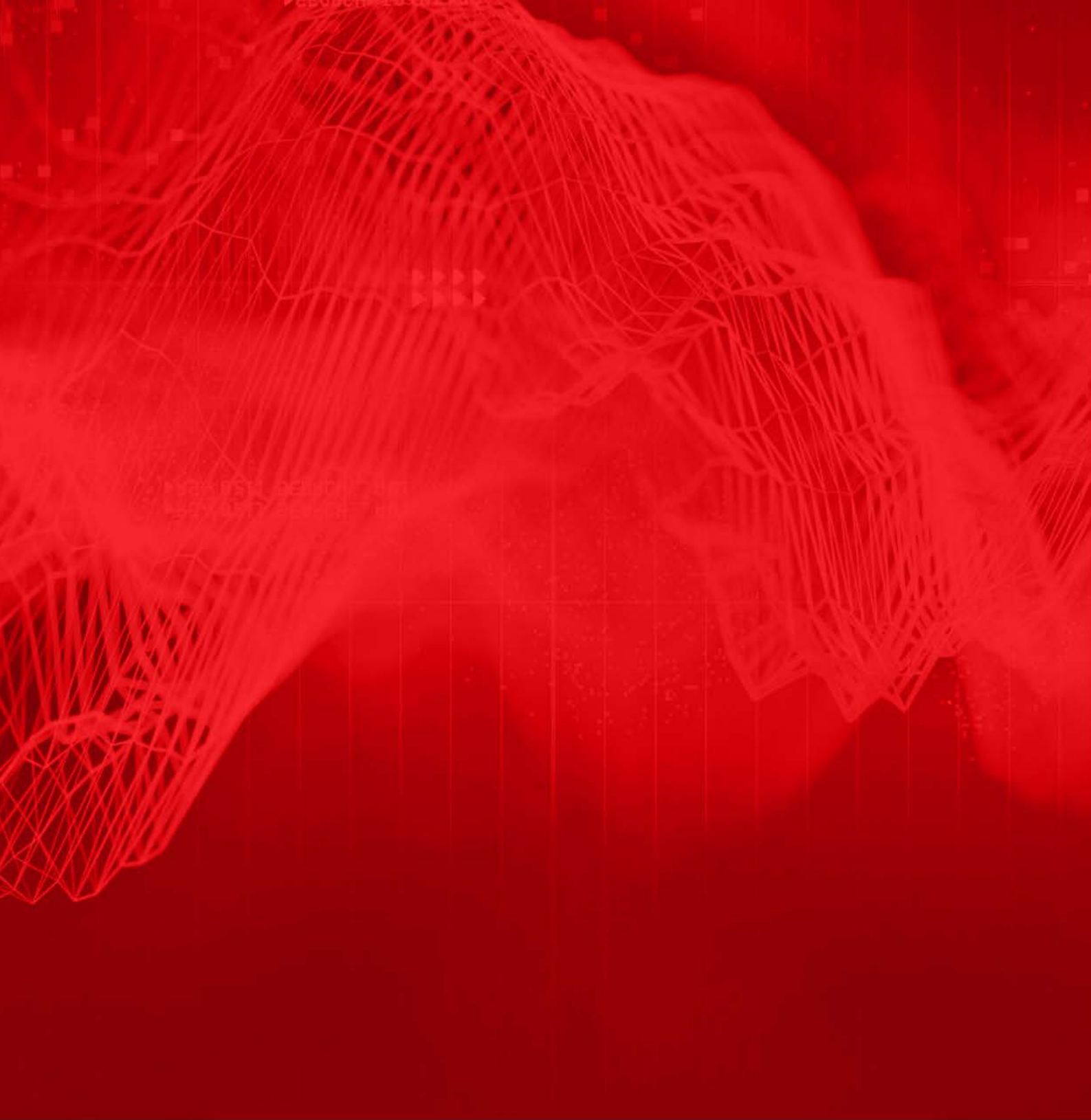
Data transparency: The OCDS is very effective for collecting, processing and monitoring procurement procedures. It allows for linking between tender stages and provides a guideline on what to publish and how to monitor across various use cases. It is recommended that this system is implemented by the National Treasury. Numerous resources to assist with this are available on the [OCDS website](#). A prioritised list of use cases for tracking procurement based on OCDS with their associated indicators and fields is available in [Annexure 8](#).

Training and engagement: Given the health procurement status quo, the following training and engagement is recommended:

- Training with journalists and civil society on what data exists, where it exists, what the shortcomings are and what indicators could be measured. Engagement with these same groups on what indicators they find most important.
- Engagement with government procurement actors on the shortcomings considered in this study and the opportunities for monitoring provided by implementation of OCDS.

Reporting and descriptive analytics: Currently, a significant volume of information and potential analysis is lost when tender adverts are removed from eTenders. Furthermore, the absence and inaccuracy of date information across stages prevents useful analysis. Constant scraping and development of a data catalogue would ensure that data is archived and date stamped. Users would also benefit from the basic descriptive analysis that can be done given the current published information, perhaps via a dashboard.

Focus on health procurement: There are specific OCDS resources dedicated to health procurement, which can require its own lens. Mapping of health procurement in SA would be beneficial. For example, who is responsible for procuring which supplies and where are these published? What unique procurement practises apply to health procurement and where are these published? This would ensure that whatever decisions are made, also benefit and suit the unique needs of health procurement.



Annexure 1



Annexure 1: Methodology

The methodology used to conduct the scope of work is described in the figure below. Further detail on each of these steps is provided thereafter.



1.1 Open Contracting Data Standards

The Open Contracting Data Standards framework was used to guide the analysis at all stages.

“The Open Contracting Data Standard (OCDS) enables disclosure of data and documents at all stages of the contracting process by defining a common data model. It was created to support organizations to increase contracting transparency, and allow deeper analysis of contracting data by a wide range of users” ([OCDS](#)).

The OCDS schema (fields and indicators) was derived through user needs. The four main groups of user need that guide the development of the open contracting standard are:

- Achieving value for money for government;
- Strengthening the transparency, accountability and integrity of public contracting;
- Enabling the private sector to fairly compete for public contracts;
- Monitoring the effectiveness of service delivery.

The success of implementing OCDS should not be measured by compliance but by how much data is being used. The real results of open contracting come from the engagement of diverse government actors, citizens, businesses, technologists, journalists and academia. Each of these groups have their own needs / use cases, as described in more detail in [Annexure 1: Findings of User Need Research](#).

OCDS encourages the publishing of information from the procurement planning stage through to the implementation stage, in a format that can be easily extracted and analysed. OCDS recommends an organisation-specific coding system, where objects such as organisations and milestones can be reused, allowing advanced analytics across tenders. It has a growing community of users and a range of open source tools. Generally, OCDS would be developed and applied by the procuring organisation. For the purposes of this project, it was used as a good practise template, against which South African portals could be compared. This required flexibility in how OCDS was applied.

1.2 Data Catalogue Template

As a first step, relevant fields, definitions and codelists from the OCDS schema were copied into a Google Sheet. Thereafter, new fields were added based on the South African context. These fields were either derived from local procurement legislation or collected from the portals themselves. All fields were then converted to uniform OCDS nomenclature and new definitions and codelists were added where necessary. The structure of the catalogue, which runs over multiple tabs, was developed in alignment with OCDS and allows for multiple row entries per tender per field where required, and accommodates the numerous instances where data is not available across all tabs. The thread that ties entries across tabs is the tender identifier (tender number/bid number/reference number). An example of procurement data from the eTenderPublication portal was entered and the portal refined as a result of this exercise. The data catalogue template was refined throughout the process of scraping, entering data and calculating indicators. The data catalogue template can be found [here](#).

1.3 Rapid Assessment

For the rapid assessment, 12 portals (3 national, 9 provincial) were chosen. These were the main public procurement portals per province and nationally. Fields available on the portal were mapped against the data catalogue fields, using the catalogue template. All standard fields were added, regardless of whether they were in PDFs or HTML. All standard document attachments were listed. Fields or documents that varied from tender listing to tender listing were excluded. Data within the fields on the portals were ignored for this exercise. This provided a good understanding of which fields were available across portals and provided the knowledge necessary to assess the quality of the portals. Portals were scored according to a framework developed by Open Cities Lab for the purposes of providing a portal overview. Each criterion was scored out of 5, where 1 = bad/worst and 5 = good/best. Scoring was assessed relative to the other portals, not relative to the ideal portal (e.g. OCDS schema). The criteria are:

- Geographic coverage
- Procurement stage coverage
- Information detail (fields covered)
- Amount of data available in HTML
- Time period coverage
- Accuracy of data
- Bugginess of site

A summary of the rapid assessment results can be found in [Annexure 2: Rapid Assessment](#). The detailed assessment and scoring can be found [here](#).

1.4 Deep Dive Selection

Based on the scoring, the following portals were shortlisted for deep dives. A deep dive on a portal includes scraping data within the portals, entering that data into the data catalogue, and performing an indicator analysis.

- eTenders
- Gauteng Province
- ~~Government tender bulletin~~
- KZN DOH
- National DoH
- North West DoH

Despite the high score of the Government Tender Bulletin, it was recommended that this is ruled out as it is released as PDFs only and offers no additional value to etenders.

The following criteria were considered when selecting deep dives:

- Breadth of data (number of procurement stages and fields)
- Unique offerings (procurement stage or fields that are only available on one portal, making new indicators viable)
- Number of records (time coverage)
- Ease of scraping

Ease of scraping, specifically the number of fields available in HTML, was given priority in the selection process. While it is possible to manually enter data into the catalogue from PDFs, it is resource intensive, and was not considered to be the most effective use of resources at this point in the project. It was decided that the indicator list would show the full extent of indicators that could be calculated and this would be used for lobbying health departments to release data in a more accessible format and structure. An added benefit of taking this approach to choosing deep dives is that the scraping exercise can then be repeated in future without needing a lot of resources, furthermore, the fields are most likely to remain the same when it is built into the website. Therefore, the final recommended deep dive list was:

- eTenderPublication
- Gauteng Province
- North West DoH

1.5 Data Portal Scraping

The process for scraping each of the 3 portals is described below. It should be noted that a decision was taken not to scrape PDFs as part of this project due to time and resource constraints.

1.5.1 eTenderPublication Scrape

The first portal to be scraped into the data catalogue was the eTenderPublication Portal. Data was extracted between 29 May and 2 June 2020. Scraping the data was simple and the complete set was scraped within a week. Scraping yielded 4 data sets for advertised, awarded, closed and canceled tenders. For advertised tenders there is a documents tab which was not included in the scrape as the PDFs are not uniform. The following actions were taken to enter the scraped data into the data catalogue:

- In order to separate out the health-related records, relevant categories were chosen (Supplies: Medical and Human Health Activities). However, not all Department of Health tenders were categorised under these categories. For advertised tenders, data that fell into other categories with a keyword search of health, medical, COVID, and Corona were also included.
- Before merging the datasets, they were cleaned. Beautiful soup and/or HTML2markdown was used to clean off the HTML on advertised and awards data⁷.
- Each set was then separated out into the columns in the data catalogue and cleaned further. A read-through of all cells was necessary for deletion of phrases like “See attached tender advert”, “rate-based”, “available on written request”, “n/a”, “multiple award”, and for moving information into the correct field, for example, telephone numbers were filled in where contract price should be, or contract prices were filled in where the director’s names should be.

⁷ For further cleaning and to the point of analysis one could use the Pandas library. This script could be written into the scrape script too. That work is not in the scope of this project but it can be done. Each data set (advertised, closed, canceled and awarded would have their own cleaning scripts as their scrape outputs would yield different columns).

- Advertised tenders are well structured for scraping except for the information that is under the contact tab/section. This section holds information on: tender/id, tender/description, procuring entity enquiries contact details (name, email, telephone, fax), place where bid documents can be obtained, where bid applications can be delivered, briefing session details (date, time, venue, optional/compulsory) and then special conditions which usually notes any changes to normal procedure. All of this information fell into one column when scraped, therefore, it needed to be separated out into columns that relate to the OCDS data catalogue.
- A similar exercise was necessary for the awards data. This was necessary for directors' info, contract info, and the section under participants. Information entered under the participants section sometimes was the procuring entity and sometimes the unsuccessful bidders. These needed to be manually moved into the correct columns.
- Duplicate tenders were removed. This required searching for duplicate tender numbers then checking if it is the same tender that has been loaded twice or if they are different tenders that have the same tender/id. Where information across all fields was the same, the duplicate was removed. Where information across all fields was different, the record was left in the dataset.

The eTenders data catalogue can be viewed [here](#).

1.5.2 North West Department of Health Scrape

The data from the North West portal was collected using Tabula for the advertised tenders where there were 47 records, and manually for awards, where there were only 11 records. This decision was informed by the state of the portal, which is not regularly maintained. Had scraping been employed this would have been done using Python libraries - specifically Selenium or BeautifulSoup to be able to parse the Html for cleaning. Only data for advertised and awarded tenders was included as these are the only sets that are available in Html, the rest is in scanned PDFs.

For wrangling, Google Sheets was used to map the existing fields to the OCDS fields and tabs (see an [example here](#)). The data was then moved onto Spyder for cleaning and wrangling into the data catalogue format using pandas. The script did not automate the whole cleaning and wrangling process, there were some points where manual intervention was necessary. It would be difficult to automate a process that goes from scraping to wrangling into data catalogue output because of the fact that the scraping would yield one big Html field that would make cleaning a difficult process, it can be done but would require a lot of work to get it to a fully automated state.

For descriptive analysis, indicator analysis and comparative analysis a combination of sheets and pandas was used. The North West data catalogue can be viewed [here](#).

1.5.3 Gauteng Portal Scrape

Data was collected manually from the portal due to small yield and time constraints around cleaning the type of data that would have come out of scraping. 4 Data sets were obtained: advertised tenders (4 rows), canceled tenders, closed tenders, and awarded tenders. All sets in HTML had information regarding the tender ID, the tender description, tender briefing session, and tender period start and end dates. Awards information regarding contract value amounts and awarded suppliers are uploaded as PDFs on the portal, that data was extracted using tabula and then joined together with pandas. There were differing field names across award PDFs. Awards published from 20/12/2009 to 01/08/2010 are published with an “award date” and then awards published onwards from 13/05/2011 have published an “advert date”. A decision was made to map the information to the data catalogue as: advert date = award date and award date = award date.

The data was cleaned, wrangled, and analysed (descriptive analysis, indicator analysis, and comparative analysis) using a combination of sheets and pandas and then tables were created to show duplication of tender IDs across the two portals (eTenders and Gauteng). The Gauteng data catalogue can be viewed [here](#).

1.6 Indicator List

Indicators are the result of a combination of fields and are used to provide insight into the procurement process, for example, the potential for corruption. The methodology followed for developing the indicator list was as follows:

- A list of 180 indicators was sourced from a [Ugandan use case](#) and the [OCDS](#). New indicators derived from South African procurement legislation and the rapid assessment were added.
- Corruption Watch reviewed the indicators and identified 137 useful indicators from this list. OCL then removed duplicates and consolidated similar indicators to arrive at a final indicator list of 71 indicators.

Indicators were categorised according to their use cases. [Annexure 1: Findings of User Need Research](#) links use cases to users and shows the number of indicators linked to each use case, as well as the fields that are critical to each use case. A full list of indicators for each of the use cases is provided in [Annexure 8](#).

1.7 Indicator Assessment

Through the rapid assessment and process of scraping portal information, it became clear which OCDS fields were available in HTML, PDF and not available at all. As indicators are made up of fields, it was possible to categorise indicators as follows:

- Data catalogue: Indicators that can be calculated using data scraped from the portal (HTML). Indicators were sorted into 3 levels of effort: low, medium and high. Low effort indicates that the analysis can be easily done using the data catalogue with no data wrangling required. Medium effort requires some data wrangling but can still be done using the data catalogue. High effort indicates that the information does exist on the portal but that a larger, longitudinal sample is required to be able to calculate the indicator.
- Requires data within PDFs: Indicators that can be calculated using data contained within PDF on the portal.
- Insufficient information: Indicators that cannot be calculated because the information isn't published on the portal.

An additional layer of assessment included understanding the quality of the data within each of the fields and how this may impact on the results of the indicator calculation. The indicator assessment is available [here](#). A description of each indicator that could be calculated, together with the formula for calculation and how to interpret the result is provided in the report. 3 of these indicators per portal were chosen based on the quality of the data and these were calculated as examples.

1.8 Recommendations

Given the indicator assessment, experience of developing the data catalogue and research on user requirements, recommendations were developed for each portal. Recommendations were prioritised based on impact (***) = strongest positive impact on the intended outcomes of OCDS), ease of implementation (effort level) and dependency (actions that can only occur once other actions have taken place).

Annexure 2

Annexure 2: Findings from User Need Research

According to the Open Contracting Partnership, “few organisations can produce 'perfect' data right away that meets every possible user need. That's why it's important to set priorities and plan for publication based on locally identified and prioritized user needs. Publishers should articulate clear end goals, and then check data collection, processing and publication against those goals. How to follow open contracting principles depends largely on why actors want to do so; the details of the intervention depend heavily on the intended result”.⁸ This engagement has not yet occurred as part of this study, as such, insights and lessons from the successful implementation of OCDS in other parts of the world have been used to provide a preliminary prioritisation of fields, indicators and implementation steps. These insights and lessons are described below. They are drawn directly from the following sources:

- Open Contracting Partnership: [‘Using it, not losing it, over procurement data: Linking public procurement indicators to the Open Contracting Data Standard’](#)
- Lindsey Marchessault (2016) [‘How to make sure open contracting data gets used: A guide to defining the use case’](#)
- Open Contracting Data Standard: [‘Users and use cases’](#)
- Open Contracting Partnership and Development Gateway (2016) [‘Methodology for Open Contracting Scoping Studies’](#)

2.1 User Group Requirements

The OCDS schema (fields and indicators) was derived through user needs. The four main groups of user need that guide the development of the open contracting standard are:

- Achieving value for money and improving internal efficiency for government;
- Strengthening the transparency, accountability and integrity of public contracting;
- Enabling the private sector to fairly compete for public contracts;
- Monitoring the effectiveness of service delivery.

The success of implementing OCDS should not be measured by compliance but by how much data is being used. The real results of open contracting come from the engagement of diverse government actors, citizens, businesses, technologists, journalists and academia. Each of these groups have their own needs / use cases, as described in more detail below. These are drawn from research conducted internationally - local research is required to confirm that these needs are the same in South Africa.

⁸ [Using it, not losing it, over procurement data](#)

Government: Includes procurement policy makers, procurement authorities, oversight bodies, procuring entities, project managers and systems and IT staff. Open contracting data can help officials to get good value for money on the goods and services in the procurement process, and can also help in identifying whether value for money has been achieved in concluded contracts. Specifically, government actors are interested in:

- Monitoring and evaluation of procurement efficiency, competitiveness, fairness, and disclosure
- Detection of fraud or collusion
- Trends in prices and supplier performance, including in terms of quality and duration
- Engagement of public in procurement process/increased transparency
- Identification of key suppliers and monitoring quality of service delivery
- Increased participation of target supplier groups (e.g. SMEs, International Bidding)
- Systems modernization and meeting thresholds of international trade agreements/other international norms
- Integration of procurement data in broader PFM environment

Comparable data using common codelists and the availability of unit prices are particularly important for value for money use cases.

Private Sector: Includes bidders, investors, industry associations, software developers and similar who provide value added services to public data. Open contracting data can be used by private firms to understand the potential pipeline of procurement opportunities. It is a core principle of open contracting that information ought to be made available at the early stages of a contracting process, including information on planned procurement, and invitations for tenders.

Furthermore, information on past contracts can allow firms to identify upcoming opportunities for re-contracting, and can support a more competitive marketplace, as transparency creates a level playing field with information on pricing, contract dates and key deliverables. Specifically, private sector actors are interested in:

- Research on government thematic priorities and purchasing patterns
- Increased access to public contracting opportunities
- Monitoring of fairness in procurement process
- Detection of fraud or collusion in procurement process
- Identification of potential partner organizations
- Identification of priority procuring entities for bidding

Forward looking and timely information is particularly important for private sector users, as well as being able to uniquely identify procuring entities, geographic locations, sectors, and the kinds of items which are being procured.

Civil Society and Media: Includes transparency and accountability non-profit organisations, open data advocates, procurement and service delivery monitoring groups, academics, journalists. Monitoring groups want to ensure that public contracting delivers value to citizens in terms of quality of goods, works, and services provided. To monitor contracting effectively involves being able to link budgets and donor data to the contracts and results. It also involves being able to verify whether results are being delivered on the ground. Specifically, civil society and media actors are interested in:

- Detection of fraud or collusion
- Monitoring of costs and value for money
- Monitoring of geographic and sectoral allocation of procurement activities
- Identification of key suppliers and monitoring quality of service delivery
- Advocacy for enhanced rights or access to information

Data concerning budgets, delivery location and subcontracting arrangements are particularly useful for those involved in contract monitoring.

International Organisations and Donors: These actors are interested in:

- Comparative studies of openness in procurement, integrity system/good governance analyses/anti-corruption modeling.
- Investor intelligence analyses to aid business to target investment
- Supporting government reform efforts on procurement, civil society advocacy, infomediary and media efforts to address corruption

All stakeholders (civil society, the private sector, government and donors) have an interest in identifying and combating corruption in public contracting. Open contracting data can be used to scrutinize procurement documents and data for 'red flags' that might indicate public monies are being mis-used. There are two main approaches to fraud and corruption monitoring. A 'micro' approach closely scrutinizes individual procurements. A 'systemic' approach looks for suspicious patterns, and makes links between datasets to map out networks of funding, ownership and interests. Data that can be linked up using globally unique identifiers for companies is particularly important for fraud and corruption detection use cases.

Some user needs are served by direct access to bulk data. Other user needs are served by tools built on top of OCDS data that provide interfaces, visualizations, and links to spaces where users can engage with contracting bodies and data publishers.

The table below links the above findings to the use cases from the indicator analysis. Dark yellow is used to indicate where the primary interest lies for each user group and light yellow is used to indicate secondary interest. The table further shows the number of indicators linked to each use case, as well as the fields that are critical to each use case. This table can then be used to prioritise fields and indicators in the recommendations section. For example, value for money indicators are particularly useful for government stakeholders and are one of the fundamental OCDS use cases, however, no information is currently available on the eTendersPublication portal to calculate value for money indicators. This suggests that the collection and publication of fields associated with value for money indicators may be a priority.

User Interest					
	Government	Private sector	Civil society organisations and the media	International organisations and donors	Number of indicators
Collusion					9
Efficiency of Procurement Process					11
Fraud					7
Market Opportunity / Competitiveness					9
Process Rigging					18
Public Integrity					4
Reporting & Descriptive Analytics					4
Transparency & Disclosure of Procurement Process					11
Value for Money					6
Critical Fields					
Collusion	Bid values (total and itemised); Cost estimates (itemised); Tenderer, supplier and procuring entity details				
Efficiency of Procurement Process	Planning documents, Milestone dates (decisions, published and achieved), Contract details				
Fraud	All parties contact details and tender history				
Market Opportunity / Competitiveness	Adjudication and bidder details, Contract details, Supplier details (SME/local), Procuring entity, Parties' tender history				
Process Rigging	Bid values (total and itemised); Bidder details, Procuring entity, Supplier details and value, Procurement method, Milestone dates, Contract prices, Implementation payments				
Public Integrity	Procurement method, Procurement plans, Contract documents and amendments				
Reporting & Descriptive Analytics	Procurement category, Award value, Procuring entities, Parties' procurement history				
Transparency & Disclosure of Procurement Process	Implementation milestones and payments, ID linking all stages, Complaints, Blacklisted suppliers, Item details, Dates, Bidder details, All basic tender and award information				
Value for Money	Contract status, Planning budgets, Award values, Implementation payments, Milestone achievement dates, Cancelled contract details				

2.2 Common Priority Needs

The following broad recommendations are the result of research conducted by the Open Contracting Partnership (OCP) internationally (i.e. not South African specific). OCP interviewed the leads of five diverse open contracting projects from across the globe to understand what requirements are critical for their work and then consolidated this information into a list of factors across the procurement process that support a variety of use cases. The following recommendations are drawn directly from the report '[Using it, not losing it, over procurement data](#)'. It is assumed that these will also be relevant in South Africa but this remains to be tested.

Quality over quantity is the way to go: It's not realistic (or perhaps even ultimately useful) to ask publishers to publish all 300+ data fields contained within the OCDS. It is much more recommendable to ask end users directly about their needs and prioritize the complete and consistent publication of the data fields associated with those needs. Through these interviews, we found some of the most important data fields are the most basic; parties (buyers, tenderers, and suppliers), especially through the use of unique identifiers, amounts along the procurement chain, dates along the procurement chain are all of critical value to end users. These are among the most basic fields many publishers include in their publication plans. Slightly more advanced information related to items and both tender and implementation milestones is also supremely important, and supports more in-depth analysis of value for money and service quality.

Sooner is better: Timely (ideally real-time) document and data releases are a critically important publication requirement, as indicated by all five interviewees. This is especially true for the calculating of "red flags" and in the monitoring of goods and service provision. The sooner open contracting data are available for each phase of the contracting process, the more proactive use-case oriented analyses can be. For example, real time access to implementation data can allow monitoring groups to spot inconsistencies between the planned implementation schedule and the real implementation progress, which can enable mid-course correction of the problem. Should such data only be available upon completion of the project, it would be impossible to monitor the implementation issues and resolve the problem.

Data linking is the key to open contracting: Four out of five interviewees noted that linking data related budget, contracting, and expenditures directly supports the achievement of their intended results. For this reason, the OCDS and its extensions allow for the publication of robust information across all five phases of the contracting process: from planning, to contracting (tender, award, contract), to implementation. Linking up data from across the procurement chain allows actors across sectors to develop a deeper understanding of a contracting process and run a variety of analyses across all of the five mentioned use cases. It is for this reason that the unique identifier of the contracting process including in the OCDS scheme (the OCID) is so important: the OCID allows for the linking of information from the start of a contracting procedure to its end.

Feedback matters: All five interviewees noted feedback mechanisms that allow for intra- and cross-sectoral interaction as a key stakeholder requirement for use cases, and the majority of the others explicitly stated a need for communication between publishing agencies or publishing agencies and end users. Institutionalized feedback mechanisms, particularly those that enable direct interaction between publishers and end users, are key for a variety of use cases. This communication enables publishers to identify the most pressing user needs and prioritize the

publication of that information or data. This results in proactive, end user-focused publication. If the data published (the supply) doesn't match user needs (the demand), the value of these data are decreased, and end users are less likely to use and reuse the data.



Annexure 3



Annexure 3:

Rapid Assessment

Fields available across 12 portals (3 national, 9 provincial) were mapped against the data catalogue fields, using the catalogue template. The portals were scored using the following criteria:

- Geographic coverage
- Procurement stage coverage (planning, tender, award, contract, implementation)
- Level of detail provided
- Number of fields
- Amount of data available in HTML
- Time period coverage
- Accuracy of data
- Bugginess of site/portal

A summary of the rapid assessment results are outlined below. The detailed assessment and scoring can be found [here](#).

Portal name:	e-tenders
Link:	https://etenders.treasury.gov.za/content/advertised-tenders
Overall score:	33/35

The e-tenders portal is the National Treasury central tender website. It features a detailed table where one can view and scroll through all advertised tenders, and covers all entities, provinces, cities, and SOEs. In terms of the different procurement phases, the portal covers adverts, awards, cancelled and closed tenders. The portal shows closed tenders since 2002. There is a link through to the Office of Chief Procurement Officer website which covers deviations, expansions and tender bid opportunities (plans). Deviations, expansions and plans seem to only cover national entities. Contracts are published for transversal tenders only (i.e. where NT procures on behalf of other departments/provinces). A major challenge lies with the fact that it is difficult to follow a project throughout the stages of the tender process (i.e. planning-advert-closure-award-implementation and any amendments along the way). In terms of fields available (according to the data catalogue), there are 60 fields available, although details for closed and cancelled tenders are scarce.

While there is quite a bit of data covered in HTML on e-tenders (see fields covered in this template), there is still substantial information contained within PDF - those PDFs are completely varied, with no standards applied, creating a barrier to the ability to scrape information.

Furthermore, deviations, expansions and plans are only published in PDF, with no way to tie back to the original tender advert on e-tenders.

In general, the site is easy to use, accurate and covers a period of almost 20 years. This is a prime example of a good portal scrape and can be a standard to compare others to.

Portal name:	Gauteng Province
Link:	http://e-tenders.gauteng.gov.za/Pages/Home.aspx
Overall score:	29/35

Gauteng does not have a specific health portal, rather all tenders are published on a central provincial procurement portal. The portal covers adverts, closed, awarded, cancelled, upcoming adjudications, and Open Tender Project Progress. Closed tenders are available from 2010 to date.

The unique feature of this portal is that it is very easy to follow a single tender through the phases because the tender number is always published together with the description and date in HTML, and document attachments build throughout the phases, so even the award publication contains the original advert. Furthermore, good detail is published at each phase, including briefing attendance registers, bid opening registers, tender documents, and CSD reports on sub-contractors. Overall, approximately 50 fields are published. However, it would be much more useful if more information was in HTML, rather than PDF.

Portal name:	Government tender bulletin
Link:	http://www.gpwonline.co.za/Gazettes/Pages/Published-Tender-Bulletin.aspx
Overall score:	27/35

This site features PDF versions of tender bulletins, released on a weekly basis (since 2012). This portal is meant to be complementary to e-tenders, and there shouldn't be anything on this portal that isn't on e-tenders (given all the information is in PDF format, it will be a resource intensive process to confirm this). While the standard format is useful, with all releases in one PDF with a reliable release date, the fact that all of the data is in PDF would make scraping a challenge. In terms of fields available (according to the data catalogue), the portal covers 39 fields. It covers 3 stages of the tender process, and covers all entities and provinces, but there is scant detail on cities and municipalities.

In terms of being a viable portal for scraping, this portal doesn't really seem relevant because it comprises only PDF data and all of the data already appears on e-tenders.

Portal name:	KZN DOH
Link:	http://www.kznhealth.gov.za/tender_documents.htm
Overall score:	27/35

This portal covers tenders released by the KZN Department of Health only. Procurement phases covered include current tenders, closed tenders, tender responses, awarded tenders, tenders extension, and bid cancellations. Date range available is from 2015 to date. There are approximately 48 fields covered. Bid forms are used for advertisements and extensions and therefore contain a significant number of relevant fields in standardised format (1-pager summary of Part A of SBD documents). The layout of the pages for each of the tender stages are the same, are neat and easy to navigate, making it easy to follow a single tender through the phases. The major disadvantage of this portal is that all information is contained within PDFs.

Portal name:	National Department of Health
Link:	http://www.health.gov.za/index.php/2015-05-15-12-36-34
Overall score:	23/35

This portal covers National DoH procurement only, although most procurement is on behalf of provincial departments. Procurement phases covered include adverts, contracts and addendums to contracts (contracts and addendums for pharmaceutical tenders only). Information is available from 2012. There are 45 fields covered, however, these mostly relate to contracts (for pharmaceutical tenders), as there are no awards, closed or cancelled tenders published. Almost all fields are in PDF (several scanned). In general, the portal is not very user friendly but links etc. on the portal seem to work.

The advantage of the portal is that contracts are published (although, it is hard to say what percentage of tenders contracts are published for). The key disadvantages are that information is mostly in document attachments (making it very time consuming to scrape), and several tender stages aren't covered - especially for 'other tenders' (i.e. non-pharmaceutical).

Portal name:	North West DoH
Link:	http://health.nwpg.gov.za/index.php/latest-developments/other/tenders/current-tenders.HTML
Overall score:	23/35

This portal covers tenders released by the North West Department of Health since 2018. Phases covered include current tenders, tender response, awarded tenders, tender extensions, bid cancellations, and tender erratum (but it seems extensions and erratum are put under amendments). Approximately 52 fields, 20 of which are PDF. Only the bid advert is in HTML, all other stages and fields are in PDF (some scanned if signature is required). The PDFs are standardised and detailed but there is quite a bit of information not in tables and wording does differ slightly, which means few fields would be able to be scraped. There is a landing page for each level that lists the title and date created only - these are very often different to the title and date of the next level of information when you click through. A few links lead nowhere. Erratum and extensions seem to be addendums. This site is generally very detailed. The key disadvantage is that for all stages other than the adverts, the landing pages aren't completed well, and most of the detail is contained in PDFs.

Portal name:	Limpopo DOH
Link:	http://www.doh.limpopo.gov.za/?q=node/48
Overall score:	20/35

This portal covers tenders released by the Limpopo Department of Health only and for the 2019 - 2020 years only. Procurement phases covered include advertised tenders, awarded tenders, responses received, and archived tenders. There are approximately 24 fields covered. Most fields are within the advertised tender phase. Generally, all phases are neatly documented in PDF documents. There is a variety of types of documents and no naming convention within 'archived tenders' which is confusing.

Portal name:	Eastern Cape DoH
Link:	http://www.echealth.gov.za/index.php/tenders/tenders/category/13-tenders
Overall score:	20/35

This portal covers tenders released by the Eastern Cape Department of Health only. The portal only offers the option to select 'tender adverts' and 'tenders awarded' which then present a long list of tenders all named in different ways. Responses received and amendments are hidden within this long list with no options to filter by these tender stages. There is no way to select by year. Information is available from 2016 to date. The site is sluggish with two clicks required to get to the actual PDF document from the landing page. It would be near impossible to derive any useful information via scraping.

Portal name:	Mpumalanga DOH
Link:	http://www.mpuhealth.gov.za/tenders.HTML
Overall score:	16/35

This portal covers bid opening registers and awards by the Mpumalanga Department of Health since 2016. While there is a link to 'Tender bulletins, Supply Chain Management circulars, Procurement Plans, Awarded bids, Database registration forms, Tenders addendum, Tender Offices, eTenderPublication', it does not work. All information is in PDF format and only bid registers have a standard structure from which fields could be drawn. The key disadvantage of this portal is that the link to where critical information is listed doesn't work (it is possible that the more detailed information doesn't exist). It is hard to judge the portal based on the information that exists on the landing page as it is very scarce. There is potential to link tenderers through to awards using the bid number, which is the one positive.

Portal name:	Northern Cape Province
Link:	http://www.northern-cape.gov.za/index.php/apply/tenders
Overall score:	16/35

This portal covers all procurement by the Northern Cape Province. Bid adverts (3 documents), Awards (8 documents) and Bids Received (3 documents) are published. The low number of listings/documents leads one to believe that not all tenders are being captured, but this can't be proven. Documents are available from 2017 to date. There are only PDF attachments - none of which have standardised fields, making it impossible to include it within the field analysis.

Furthermore, while the links work, the naming and filing protocol make it very difficult to use the site. The disadvantages of this portal are many. It covers all Northern Cape procurement and there is no way of categorising out health tenders without downloading the attachments. There are very few documents on the portal. There is no way the portal can be scraped. There aren't any positive aspects that can be drawn from this portal.

Portal name:	Free State Province
Link:	http://www.freestateonline.fs.gov.za/index.php/tender-notices/
Overall score:	n/a

The Free State Province does not have its own tender portal - it links through to e-tenders.

Portal name:	Western Cape
Link:	https://etenders.treasury.gov.za/content/advertised-tenders
Overall score:	n/a

The Western Cape Province does not have its own tender portal - it links through to e-tenders.



Annexure 4

Annexure 4: Procurement Legislation

Legal Instrument	Content to be Published	Platform	Duration/ Time prescription	Responsible Party	To Note
National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3	Bid documentation Including: evaluation and adjudication criteria; and Criteria prescribed in terms of the PPFA and BBBEE	<i>At least</i> the Government Tender Bulletin	Put up 21 days before closure	Accounting Officer	Regulation published in terms of PFMA – therefore applies to National and Provincial Departments
National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3 (d)	Awards	Government Tender Bulletin and other media where bids were advertised	None	Accounting Officer	Regulation published in terms of PFMA – therefore applies to National and Provincial Departments
National Treasury Instruction Note on Enhancing Compliance Monitoring and Improving Transparency and Accountability in Supply Chain Management 3.2.1	The names of bidders in an advertised competitive bid – and <i>where practical</i> - the total price and any preference claimed by the bidders	Institutions website	Published within 10 working days after the bid closed. Information to remain on the website for at least 30 days.	None	Applies to National and Provincial. <i>Institution</i> is defined in the PFMA to include department.
National Treasury Instruction 1 of 2015/2016	Bids and Awards	eTender Publication Portal	Blank	Blank	Applies to National and Provincial.
National Treasury Instruction 1 of 2015/2016 (instruction 3)	Bid adverts over R 500 000 which must include: (a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)	eTender Portal	Blank	Accounting Officer	Applies to National and Provincial. Requirement from 1 May 2015.

National Treasury Instruction 1 of 2015/2016 (instruction 4)	<p>The awards of all advertised bids.</p> <p>Successful bids must include the following info: Contract description and bid number; (b) Names of the successful bidder(s) and preference points claimed; (c) Contract price(s), if possible; (d) Contract period; (e) Names of Directors; and (f) Date of completion/award (Instruction 4.2).</p> <p>In respect of <u>unsuccessful bidders</u> the following information must be included: (a) Names of the unsuccessful bidder(s); (b) Preference points claimed; and (c) Contract price(s), if possible (Instruction 4.3).</p>	eTender Portal	Info to be submitted to the relevant treasury's eTender portal administration within 7 days of the bid being awarded.	Blank	Note: Successful bids includes bids concluded through a limited bidding process (i.e. includes deviations and unsolicited bids)
National Treasury Instruction 1 of 2015/2016 (Instruction 6.1)	Reiterates the obligation in Chapter 16A of the Treasury Regulations to advertise bids and publish awards				6.2 requires accounting officers to ensure that the closing dates of bids advertised in the Government Tender Bulletin are the same for those bids that are advertised in the eTender Publication Portal.
The MFMA read with the Local Government: Municipal Systems Act 32 of 2000 S75(1)(a) MFMA read with	Supply chain management contracts above a prescribed value	Display the documents at the local government offices and on its official website.	Blank	Blank	<p>Applies to local government</p> <p>Note- 21B of the Systems Act requires local government to have websites <i>where affordable</i></p>
section 21A of the Systems Act read with section 120(6)(b) of the MFMA	Particulars of any proposed public-private partnership, including the feasibility study	Display the documents at the local government offices and on its official website.	At least 60 days prior to the council meeting)	Blank	

Municipal Supply Chain Management Regulations in terms of 168 of the MFMA (GG 27636 of 30 May 2005) Regulation 22(l)	Invitations to bid, which must include: The closure date for submissions and a statement that only those bid documents provided by the local government may be submitted (Regulation 22(l)(b)).	Local Newspaper, Local government website or any other appropriate way (including in the Government Tender Bulletin)	for a period of not less than 30 days for transactions exceeding R 10 million or which are of a long-term nature, and 14 days from date of publication in other instances		
Municipal Supply Chain Management Regulations in terms of 168 of the MFMA (GG 27636 of 30 May 2005) Regulation 23(c)	All bids received in time to be collated in a register. Entries in register and bid results to be published	Municipality website	Blank	Accounting Officer	
Municipal Supply Chain Management Regulations in terms of 168 of the MFMA (GG 27636 of 30 May 2005) Read with section 21A of the Municipal Systems Act Regulation 37(3)	Unsolicited bids, information to be included: Reasons why the bid should not be	Display the documents at the local government offices and on its official website.	Within 30 days	Blank	

51%

Annexure 5

Annexure 5: eTender Publication Portal

A detailed overview of information published on eTenders is provided below, along with potential indicators. All fields and indicators, together with their availability and various categorisations are available in spreadsheet format [here](#). This sheet will be expanded throughout the 3 deep dives.

5.1 Available Fields: HTML

eTenders publishes some basic information in HTML at the tender stage (advert, closed and canceled) and awards stage. The table below provides the fields that are available. The text in purple represents commentary on diversion from the OCDS fields and additions to the OCDS fields based on the South African context and eTenders structure.

Section	Field Path	Definition
Tender	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. <i>Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.</i>
	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. <i>Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.</i>
	tender/applicationAcquisition	In person, email request or electronic portal
	tender/applicationAcquisitionDetails	Address where a person can acquire the application
	tender/submissionMethod	Submission method: The methods by which bids are submitted, using the open submissionMethod codelist.
	tender/submissionMethodDetails	Submission method details: Any detailed or further information on the submission method. This can include the address, e-mail address or online service to which bids are submitted, and any special requirements to be followed for submissions.
	tender/briefingSession	<i>Is there a compulsory briefing for this tender?</i>

	tender/briefingDate	Date the briefing session is scheduled for
	tender/briefingAddress	Address where the briefing session will take place
	tender/briefingTime	Time the briefing session is scheduled for
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions.	
	tender/tenderPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided. Note: For the purposes of this report, the date the tender advert is published on the eTenders portal is considered to be the start date.
	tender/tenderPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/tenderPeriod/endTime	End time: The end date for the period. When known, a precise end date must be provided.
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured		
Tender Parties Procuring Entity	parties/name	Common name: A common name for this organization or other participant in the contracting process. The identifier object provides a space for the formal legal name, and so this may either repeat that value, or may provide the common name by which this organization or entity is known. This field may also include details of the department or sub-unit involved in this contracting process.
	parties/roles	Party roles: The party's role(s) in the contracting process, using the open partyRole codelist.
Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.		
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
For each item in the tender stage you may provide:		
Tender Items	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.	
	tender/items/deliveryLocation/description	Description: A name or description of this location. This might include the name(s) of the location(s), or might provide a human readable description of the location to be covered. This description may be used in a user-interface.
	tender/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	tender/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	tender/items/deliveryAddress/region	Region: The region. For example, CA.
	tender/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.
	tender/items/deliveryAddress/countryName	Country name: The country name. For example, the United States.
Tender Participation Fees	Participation fees: Any fees applicable to bidders wishing to participate in the tender process. Fees may apply for access to bidding documents, for the submission of bids or there may be a win fee payable by the successful bidder.	

	Value: The monetary value of this fee.	
	tender/participationFees/value/amount	Amount: Amount as a number. <i>Note: The field on eTenders referenced here always relates to the cost of the bid documents only.</i>
Update release once the tender has closed. Tenders move from the 'advertised tenders' section to the 'closed tenders' section of the portal on the closing date.		
Closed Tenders	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. <i>Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.</i>
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. <i>Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.</i>
	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.
	tender/period/start Date	The date the tender was originally published
	tender/period/endDate	Date the tender was closed
Update release if the tender is cancelled. Tenders move from the 'advertised tenders' section to the 'cancelled tenders' section of the portal.		
Cancelled tenders	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender. <i>It is assumed that the reference number provided matches the tender advert but further investigation is required.</i>
	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. <i>Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.</i>
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. <i>Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.</i>
	tender/cancellation Rationale	Reason for cancelling the tender
At the award stage, the following information may be provided (in addition to information from the planning and tender stages, and general information)		
Award information	awards/id	Award ID: The identifier for this award. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	awards/description	Description: Award description
	awards/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. <i>Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the</i>

		eTenders categories under this field.
	Contract period: The period for which the contract has been awarded.	
	awards/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	Suppliers: The suppliers awarded this award. If different suppliers have been awarded different items or values, these should be split into separate award blocks.	
	awards/suppliers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	awards/supplier/BBBEEPoints	Number of BBBEE points claimed by the supplier
	awards/supplier/totalPointsAwarded	Total points awarded once both price and BBBEE points are calculated
Value	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.	
	awards/value/amount	Amount: Amount as a number.
Directors	The eTender portal publishes the name and start date of all directors of the supplier business.	
	parties/identifier/namesOfDirectors	Names of supplier's directors
	parties/identifier/directorStartDate	Dates when director's started at the company
	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
	Bids: The bid extension allows bid statistics, and detailed bid information to be represented in the bid section. Awards can be related to a specific bid.	
Bid details	Bid details: An array of bids, providing information on the bidders, and where applicable, bid status, bid values and related documents.	
	bids/details/id	ID: A local identifier for this bid
Bid value	Value: The total value of the bid.	
	bids/details/value/amount	Amount: Amount as a number.
Tenderer	Tenderer: The party, or parties, responsible for this bid. This should provide a name and identifier, cross-referenced to an entry in the parties array at the top level of the release.	
	bids/details/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	bid/details/totalPointsAwarded	Total points awarded once both price and BBBEE points are calculated

5.2 Indicator List: HTML

Given the above available fields, the following 31 indicators are possible. Indicators are categorised into 3 effort levels, where low indicates that the indicator can be calculated using the data catalogue as it currently stands, medium requires some data wrangling and high requires a larger, longitudinal sample for the indicator to be calculated. There are three key challenges with the structure of the portal and information published that result in increased effort levels. These are:

- **Difficulty linking between contract stages:** A large amount of information published at the tender advert release is not carried across into the tenders closed release (which acts as an archive of tender adverts) or the awards release. Therefore, essential information, such as the procuring entity, is lost as soon as the tender advert is pulled down from the portal. Therefore, in a once-off scrape, several indicators which require that information cannot be calculated, but with constant/frequent scraping, a larger sample of tender adverts can be stored, availing the required information to calculate these indicators.
- **Missing date information:** Only the tender start and end date is published with the tender advert and closed release. Neither the date of the award decision or the date the award was published is available. This makes numerous time-based indicators impossible to calculate. Frequent scraping would provide a date stamp for awards and would allow several indicators to be calculated.
- **Highly inconsistent tenderer/bidder information:** Tenderers are published with the awards release, separated as 'successful' and 'unsuccessful' bidders, however, 'unsuccessful bidder' information is poorly completed. This includes the fact that the status of the tenderer is not published. It is assumed that if the tenderer was not assigned points they were disqualified but without consistent data this assumption cannot be relied on. It could well be that the points were just entered inconsistently. This means that, while the fields published allow for numerous tenderer based indicators to be calculated, the reality is that the results would likely be inaccurate.

While all 31 potential indicators have been included below, in reality, only 7 indicators that are marked as low effort and do not rely on tenderer information can be easily and reliably calculated using the current sample and data catalogue. These are listed below and highlighted in green in the tables that follow.

- % of tenders using electronic bidding
- Common contact details between suppliers
- Tendering period less or more than 21 days
- Number and value of awards by procurement category
- List of largest procurements
- % of tender adverts that don't publish basic tender information
- % of tender awards that don't publish basic award information

Market Opportunity / Competitiveness

Percent of tenders with at least three participants deemed qualified

Effort	Low
Description	This calculates the percent of tenders with at least three participants deemed qualified. Can be calculated across all tenders or segmented by procuring entity or other.
Considerations & challenges	There is no field published for 'qualified bidders', rather this is derived as follows: Adjudication in South Africa is legislated as a four part process: compliance, functionality, price and level of Broad Based Black Economic Empowerment (BBBEE). All bidders who have the correct supply chain documents and meet the functionality requirements are awarded points based on price and BBBEE, which are used to determine the winning bidder. If a bidder has been awarded points then it is assumed they were not disqualified (qualified).
Formula	<p>For each tender award:</p> $\text{if number of qualified bidders} > 3 \text{ then count}(\text{tender}) = 1$ $\text{percent of tenders} = \frac{\sum \text{count}(\text{tender})}{\text{Total number of tender awards}} * 100$
Interpretation	A higher percent of tenders with three or more bidders may signal a highly competitive tenders, which may be related to effective preparation of a buyer and could ensure a better market price
Data needed	<p>Total points awarded per bidder bids/details/totalPointsAwarded</p> <p>Total number of tender awards Count of: awards/id</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Mean number of tenderers (bidders) per tender

Effort	Low
Description	This indicator calculates the mean and median number of bidders per tender.
Considerations & challenges	This has to be calculated for open tenders where competition is expected, so direct awards should be excluded.
Formula	$\text{mean}(\text{number of bidders per tender})$ $\text{median}(\text{number of bidders per tender})$
Interpretation	Having a higher number of tenderers per tender signals a higher competition, while receiving few offers can be considered a risk.
Data needed	<p>Number of bidders</p> <p>Count of: bids/details/tenderer/name</p> <p>Awards awards/id</p> <p>It should be noted that the tenderer/bidder information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Mean number of unique suppliers per procuring entity / buyer

Effort	High (not possible with current dataset, requires regular scraping)
Description	This calculates the number of unique suppliers by procuring entity.
Considerations & challenges	<p>This can be calculated by year. This can also be calculated as a percentage / ratio (percentage of awards that are unique when compared to all awards). It can also be calculated using the value of awards to unique suppliers.</p> <p>For eTenders, the procuring entity and award date isn't published with the awards release, which makes calculating this indicator more onerous as one must link the award number to the tender number in order to obtain the procuring entity and to generate date parameters. In order to do this, eTenders would need to be scraped consistently over time because adverts are removed periodically.</p>
Formula	<p>Grouping by procuring entity:</p> $\frac{\sum \text{Number of unique suppliers}}{\sum \text{Number of awards}}$ $\frac{\sum \text{Award value}}{\sum \text{Award value}}$
Interpretation	A higher mean number of unique suppliers can indicate greater market fairness. Rotating suppliers and a larger number of suppliers per entity may be measures of system openness and competition
Data needed	<p>Tender number as per the awards release awards/id</p> <p>Tender number as per the tender release tender/id</p> <p>Procuring entity tender/procuringEntity/name</p> <p>Supplier awards/suppliers/name</p>

Percent of new (first time) tenderers to all tenderers

Effort	Medium
Description	This calculates the percentage of new (first time) tenderers to all tenderers.
Considerations & challenges	<p>For eTenders, tenderers are published along with the awards release, which isn't dated, so establishing a time period will not be possible. Furthermore, there are no tenderer id's published so this would need to be done using tenderer names, which provides room for inaccuracy, as it relies on how the tenderer names are captured by varying individuals.</p> <p>This ideally would be calculated by year and procuring entity but neither the date or procuring entity are published with the awards.</p>
Formula	<p>For all tenders / awards</p> $\text{percent of first time tenderers} = \frac{\sum \text{Number of first time tenderers}}{\sum \text{Number of tenderers}} * 100$
Interpretation	When used with other business engagement indicators, growth in the percent of new bidders to all bidders can signal changes in the level of bidder confidence in and awareness of the contracting system.
Data needed	<p>Tender number as per the awards release awards/id</p> <p>Tenderer bids/details/tenderers/name</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Number and value of awards to new (first time) suppliers and conversely to repeat suppliers

Effort	Medium
Description	This calculates the percentage of awards (and value) awarded to new (first time) suppliers. Conversely, this calculates the percentage of awards granted to repeat suppliers. An extension of this indicator is to calculate the share of contracts awarded to top 10 suppliers (per procuring entity; either as amount or percent of contracts awarded).
Considerations & challenges	<p>For eTenders, the awards release isn't dated, so establishing a time period will not be possible. Furthermore, there are no supplier id's published so this would need to be done using supplier names, which provides room for inaccuracy, as it relies on how the supplier names are captured by varying individuals.</p> <p>This ideally would be calculated by year and procuring entity but neither the date or procuring entity are published with the awards.</p>
Formula	<p>For all awards</p> $\text{percent of first time suppliers} = \frac{\sum \text{Number of first time suppliers}}{\sum \text{Number of suppliers}} * 100$
Interpretation	A higher percent of new (first-time) suppliers may indicate greater system openness and potential for competition. A higher percent of total sum awarded to repeat suppliers may indicate lesser system openness and potential for competition. This indicator is more powerful when one also considers the age of bidding companies, as new young bidders could, in certain contexts, be a risk to integrity.
Data needed	<p>Supplier awards/suppliers/name</p> <p>Value awards/value/amount</p>

Efficiency of Procurement Process

Percentage of tenders using electronic bidding

Effort	Low
Description	The percentage of tenders that allow for bids to be submitted electronically.
Considerations & challenges	None
Formula	$\text{percent of tenders} = \frac{\sum \text{number of tenders using electronic bidding}}{\text{Total number of tender adverts}} * 100$
Interpretation	Allowing electronic submissions can result in more efficient bid processing and reduces the cost (time and money) placed on bidders.
Data needed	<p>Tender number: tender/id</p> <p>Tender submission method: tender/submissionMethod</p>

Proportion of canceled tenders to awarded tenders and total tender adverts

Effort	Medium
Description	Calculates the proportion of cancelled or unsuccessful tenders compared to total tenders advertised and awards made. .
Considerations & challenges	<p>There is no date published with cancelled tenders therefore this indicator would need to be calculated at a point in time and would not represent a time period (e.g. 2020) but rather all records published up to a point in time.</p> <p>Ideally, this indicator would also be calculated for the value of cancelled tenders but the value is not published.</p>
Formula	$\frac{\sum \text{cancelled or unsuccessful tenders}}{\sum \text{Total tenders}} * 100$ $\frac{\sum \text{cancelled or unsuccessful tenders}}{\sum \text{Total awards}} * 100$
Interpretation	Having a high value in this indicator could signal inefficiencies in the procurement process.
Data needed	<p>Tender number as per the cancellation notice: tender/id</p> <p>Tender number as per the tender release (advert): tender/id</p> <p>Tender number as per the awards release awards/id</p>

Transparency & Disclosure of Procurement Process

% of tender adverts that don't publish basic tender information

Effort	Low
Description	National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include: (a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)
Considerations & challenges	The bid documents published cannot be ascertained via the data catalogue, however, all other requirements can be. Can be calculated per year for all categories and procuring entities, or segmented.
Formula	For each tender information category, for all tender adverts: $\text{percent of tenders} = \frac{\sum \text{count}(\text{false})}{\text{Total number of tenders advertised}} * 100$ <p style="text-align: center;"><i>count where tender information category = false</i></p>
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.
Data needed	<p>Tender description tender/description</p> <p>Tender Number tender/id</p> <p>Procuring entity name tender/procuringEntity/name</p> <p>Place where good or services will be delivered/implemented tender/items/deliveryLocation/description</p> <p>Closing date and time of tender advert tender/tenderPeriod/endDate & endTime</p> <p>Contact details of tender contact point parties/contactpoint/name & email & telephone & faxNumber</p> <p>Where the tender documents are available from tender/applicationAquisitionDetails</p> <p>Where the tender response/submission should be submitted tender/submissionMethodDetails</p>

% of tender awards that don't publish basic award information

Effort	Low
Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 4) dictates that certain basic award information must be published on eTenders for national and provincial department procurement within 7 days of the bid being awarded. This includes:</p> <p>(a) Contract description and bid number; (b) Names of the successful bidder(s) and preference points claimed; (c) Contract price(s), if possible; (d) Contract period; (e) Names of Directors; and (f) Date of completion/award</p>
Considerations & challenges	The date of award is not published on eTenders. Note: Successful bids includes bids concluded through a limited bidding process (i.e includes deviations and unsolicited bids) (this cannot be calculated using the data catalogue which only accounts for open tender processes).
Formula	<p>For each award information category, for all award notices:</p> $count\ where\ awards\ information\ category = false$ $percent\ of\ awards = \frac{\sum count(false)}{Total\ number\ of\ award\ notices} * 100$
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation.
Data needed	<p>Awards description awards/description</p> <p>Award Number awards/id</p> <p>Supplier name awards/suppliers/name</p> <p>Supplier points claimed awards/suppliers/totalPointsAwarded</p> <p>Contract price awards/value/amount</p> <p>Contract period end date awards/contractPeriod/endDate</p> <p>Names of directors parties/identifier/namesofDirectors</p>

% of tenders that don't publish basic unsuccessful bidder information

Effort	Medium
Description	In respect of unsuccessful bidders the following information must be included: (a) Names of the unsuccessful bidder(s); (b) Preference points claimed; and (c) Contract price(s), if possible (National Treasury Instruction 4.3).
Considerations & challenges	Calculating this indicator is complicated by the fact that there is no tenderer notice published on eTenders. Tenderers are published as part of the awards release separated into 2 tables (successful bidder and unsuccessful bidders). These tables have been merged into 'bids' to get an understanding of all tenderers but often points claimed and contract price is published for the supplier only, or no unsuccessful bidders are published at all, making the data very difficult to analyse as one set.
Formula	<p>For each award information category, for all award notices:</p> $count\ award\ id\ where\ tenderer\ information\ category = false$ $percent\ of\ awards = \frac{\sum count(false)}{Total\ number\ of\ award\ notices} * 100$
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation.
Data needed	<p>Award Number awards/id</p> <p>Tenderer name bids/details/tenderers/name</p> <p>Tenderer points claimed bids/details/totalPointsAwarded</p> <p>Price bids/details/value/amount</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

% Publication of awards with links to tender adverts

Effort	High (not possible with current dataset, requires regular scraping)
Description	Publication of awards with links to tender adverts
Considerations & challenges	It is important to be able to link various stages of the contract process. eTenders publishes the bid number at the ITB and award stage. Frequent scraping on tender adverts required to develop a database which can be searched when awards are published.
Formula	For each award: $\text{percent of awards with links to tender adverts} = \frac{\sum [\text{awards/id}] = [\text{tender/id}]}{\text{Total number of awards}} * 100$
Interpretation	All awards should have links to tender adverts (100%).
Data needed	Award Number awards/id Tender number tender/id

Awards are published for every bid and within XX number of days

Effort	Medium
Description	For every tender advert, there is a corresponding award notice (excluding cancelled tenders). This requirement is per National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3 (d). Regulation published in terms of PFMA – therefore applies to National and Provincial Departments. A higher rate of tenders without timely awards information may signal lack of integrity. No awards information can signal that the tender process was not fully completed. If it was completed, the interaction between the bidders and buyer is not transparent, and relevant interested parties cannot monitor the process.
Considerations & challenges	Bids are archived in 'closed tenders' on eTenders. It is possible to match the awards to the bids using the tender id. Therefore, it is possible to check that awards are published for all bids, but it is not possible on a once off scrape to determine the number of days because there is no date published with the award release.
Formula	For all tenders and awards: $\text{if tender number} \neq [\text{award number}], \text{return } x$
Interpretation	Where tenders do not have corresponding awards after a period of time, this is a red flag.
Data needed	Tender Number tender/id Tender end date tender/endDate Award Number award/id

Reporting and Descriptive Analytics

List of largest procurements

Effort	Low
Description	A list of procurements by value over a period of time
Considerations & challenges	Date of award and contract start date not published with award release.
Formula	<i>sort award value</i>
Interpretation	Descriptive only.
Data needed	Awards identifier awards/id Awarded contract value awards/value/amount Time period awards/contractPeriod/endDate

List of largest procuring entities

Effort	High (not possible with current dataset, requires regular scraping)
Description	List of largest procuring entities (in terms of amount of money spent)
Considerations & challenges	Procuring entity is not published at the awards stage so the bid number will be used to link to the tender advert where the procuring entity is published.
Formula	For each procuring entity: $\sum \text{Value of awards}$
Interpretation	Descriptive only.
Data needed	Awards identifier awards/id Tender identifier tender/id Awarded contract value awards/value/amount Procuring entity tender/procuringEntity/name

Number and value of awards by procurement category

Effort	Low
Description	Value of awards per procurement category over time.
Considerations & challenges	Procurement categories are unique to eTenders (not standard OCDS)
Formula	<p>Grouping by procurement category:</p> $\sum \text{Value of awards}$ $\sum \text{Number of awards}$
Interpretation	Descriptive only.
Data needed	<p>Procurement category awards/mainProcurementCategory</p> <p>Awarded contract value awards/value/amount</p>

Number of tenders advertised by government level (national, provincial, local)

Effort	High (requires data wrangling/cleaning of the catalogue)
Description	% of procurement conducted at central, provincial & local levels (distribution of procurement across government levels)
Considerations & challenges	<p>Level of government is not a published field, however, it can be derived from the procuring entity within the data catalogue. This would need to be on a record by record basis, as there is not a standardised way of writing the procuring entity. Some knowledge of government institutional structures would be required to do this.</p> <p>Ideally, this would be calculated by value of award but the procuring entity is not published with the award.</p>
Formula	<p>Grouping by level of government:</p> $\sum \text{Number of tenders}$
Interpretation	Descriptive only.
Data needed	<p>Tender number tender/id</p> <p>Procuring entity tender/procuringEntity/name</p>

Collusion

Lowest bid prices have a difference of less than 2.5%

Effort	Low
Description	This calculates the price difference between the lowest bid price and the second lowest bid price.
Considerations & challenges	Due to rated criteria applied, the lowest price bidder is not necessarily the winning bidder.
Formula	For each tender: $\text{lowest price difference} = \frac{\text{second lowest bid price} - \text{lowest bid price}}{\text{lowest bid price}} * 100$
Interpretation	Existence of two bids submitted within 1% (Rigid Threshold) or 2.5% (Soft Threshold) of each other could indicate collusion.
Data needed	<p>Bid price bid/details/value/amount</p> <p>Tender number awards/id</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Difference between bid prices is an exact percentage

Effort	Low
Description	Difference between bid prices is an exact percentage (whole number)
Considerations & challenges	None
Formula	For all bid prices for each tender: $\text{price difference} = \frac{\text{bid price a} - \text{bid price b}}{\text{bid price b}} * 100$
Interpretation	Bids are an exact percentage apart, a sign of potential collusion and false bidding.
Data needed	<p>Bid price bid/details/value/amount</p> <p>Tender number awards/id</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Losing bid prices are unrealistic

Effort	Low
Description	Cluster different types of last- three-number strings (e.g. "000," "999," "100," etc.) and see what strings are outliers
Considerations & challenges	None
Formula	For all bid prices for each tender: <i>if bid price ends in a three – number string, return x</i>
Interpretation	Losing bids are round numbers
Data needed	Bid price bid/details/value/amount It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.

When x supplier wins, same set of tenderers loses

Effort	Low
Description	When X supplier wins, same set of tenderers loses (at least twice)
Considerations & challenges	Procuring entity not published at award stage so this indicator cannot be segmented.
Formula	None.
Interpretation	The same companies always bid, the same companies always win and the same companies always lose.
Data needed	Award identifier awards/id Supplier name awards/suppliers/name Tenderer names bids/details/tenderers/name It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.

Fraud

Common contact details between suppliers

Effort	Low
Description	This checks whether the supplier's contact details across tenders match but have different names (suggesting the procuring entity is disguising the fact that the same suppliers is being awarded multiple tenders)
Considerations & challenges	Address details aren't published for suppliers. It would be useful to consider common details between tenderers/bidders but this information is not published. If tenderers share contact details it provides the illusion of competition when there is only 1 or few genuine bidders. Director names can be added as a useful check.
Formula	For all tenders: <i>if supplier 1 contact details = supplier 2 contact details = supplier..., return x</i>
Interpretation	Supplier's contact details match other supplier's who have different names.
Data needed	Tender number award/id Supplier contact details parties/contactPoint/email & telephone Directors awards/suppliers/directorName

Common contact details between procuring entities and suppliers

Effort	High (not possible with current dataset, requires regular scraping)
Description	This checks whether the supplier's contact details match the procuring entity's (suggesting the official at the procuring entity is also a bidder)
Considerations & challenges	The procuring entity is not published with the award, which means that the bid number would need to be used to track down the procuring entity and contact details. A tender specific check would require more frequent scrapes to collect more procuring entity details published at the advert stage.
Formula	For all tenders: <i>if procuring entity contact details = supplier contact details, return x</i>
Interpretation	Supplier's email address or phone number matches project officials who have different names.
Data needed	Tender number award/id Supplier and procuring entity contact details parties/contactPoint/email & telephone

Supplier is less than 12 months old and has never bid before

Effort	Low
Description	Supplier is less than 12 months old and has never submitted a bid for another contract.
Considerations & challenges	The age of the supplier can only be calculated using the director start dates, which are published with the award, as the registration date of the company is not published. All director start dates should be less than a year.
Formula	For each tender: <i>if all director start dates < 1 year, return x</i>
Interpretation	Winning bidder may be shell company or lacking sufficient experience
Data needed	<p>Award identifier awards/id</p> <p>Director start dates parties/identifier/directorStartDate</p> <p>List of suppliers awards/suppliers/name</p>

Process Rigging

Winning bid is lower than other bids by 25% minimum

Effort	Low
Description	Winning bid is lower than other bids by 25% minimum (when there are two or more bids)
Considerations & challenges	Due to rated criteria applied (BEE and price), the lowest price bidder is not necessarily the winning bidder.
Formula	<p>For each tender and bidder:</p> $bid\ price\ difference = \frac{bid\ price\ 1 - bid\ price\ 2}{bid\ price\ 2} * 100$ <p><i>if bid price difference > 25%, return x</i></p>
Interpretation	Winning supplier provides a substantially lower bid price than competitors.
Data needed	<p>Award identifier award/id</p> <p>Bid price bids/details/value/amount</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Awarded competitive tender only had a single tenderer

Effort	Low
Description	This awarded competitive tender only featured a single bid/tenderer
Considerations & challenges	It is possible that where tenderers are not published it does not mean they didn't exist, but rather that they just weren't captured.
Formula	<p>For each tender:</p> $number\ of\ tenderers = count\ of\ tenderers$ <p><i>if number of tenderers = 1, return x</i></p>
Interpretation	Competitive award issued despite a non-competitive process
Data needed	<p>Award identifier award/id</p> <p>Number of tenderers: Count of: bids/details/tenderers/name</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Only winning bidder was eligible for a tender that had multiple bidders

Effort	Low
Description	Specifications reduce competition by preventing participation of responsive bidders/ False bids are issued (possibly by fictitious contractors) to give the appearance of competition
Considerations & challenges	It is possible that where tenderers are not published it does not mean they didn't exist, but rather that they just weren't captured.
Formula	For each tender: <i>if number of qualified bidders = 1, return true</i>
Interpretation	Competitive award issued despite a non-competitive process
Data needed	Award identifier award/id Number of tenderers: Count of: bids/details/tenderers/name It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.

Tendering period less or more than 21 days

Effort	Low
Description	Number of days between the tender start date and its closing date.
Considerations & challenges	National Treasury Regulation (GC 27388 of 15 March 2005) 16A 6.3. Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.
Formula	<i>duration = Tender period end date – Tender period start date</i> <i>mean(duration)</i> <i>median(duration)</i>
Interpretation	Allowing an unreasonably short time to respond to requests for bids can reduce competition. A tender period of more than 21 days may signal inefficiencies.
Data needed	Tender start date: tender/tenderPeriod/startDate Tender end date: tender/tenderPeriod/endDate

Ratio and mean of bids which are disqualified

Effort	Low
Description	This calculates the mean percent of bids which are disqualified in a given period. Most commonly filtered by procuring entity but can be filtered by other fields such as category or supplier. Alternatively, one can calculate the ratio of non-responsive bidders to all bidders (If there are 4 or more bidders and only 2 of the bidders are eligible, perhaps this can be the flag. So if there are 5, 6 or 7 bidders, and only 2 are eligible, the contract would be flagged)
Considerations & challenges	There is no field published for 'disqualified bidders', rather this is derived as follows: Adjudication in South Africa is legislated as a four part process: compliance, functionality, price and level of Broad Based Black Economic Empowerment (BBBEE). All bidders who have the correct supply chain documents and meet the functionality requirements are awarded points based on price and BBBEE, which are used to determine the winning bidder. If a bidder has been awarded 0 points or the points value is missing or written as n/a, then it is assumed that the bidder was disqualified at the compliance or functionality stage. Note: bidder data is patchy.
Formula	For each award: $\frac{\text{Number of disqualified bidders}}{\text{Total number of bidders}}$
Interpretation	Unreasonably narrow contract specifications that favor the winning bidder and exclude others. A higher mean percent of bidders disqualified from participation may indicate that a buyer may subject bidders to unjustified disqualification. This can reduce confidence in a buyer and, as a result, reduce the number of bidders wishing to bid for future tenders with this buyer.
Data needed	<p>Total points awarded per bidder bids/details/totalPointsAwarded</p> <p>Total number of bidders bid/details/tenderers/name</p> <p>It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.</p>

Success rate of tenderers (bidders)

Effort	Low
Description	This calculates the ratio between the number of tenders won versus the number of tenders a firm bid for (win-loss ratio) and the number of tenders in general. This can be calculated for the whole market or segmented. For reporting: use the average and median success rate of bidders (plot the distribution) and calculate the proportion of bidders with a success rate of zero and 100%, and those that are 2 standard deviations above and below the mean.
Considerations & challenges	Ideally this should be done for a specific date period and procurement entity but neither are published with the awards release on eTenders, however, it can be done using the data in the data catalogue at a point in time.
Formula	For each supplier: $\frac{\sum \text{awards}}{\sum \text{tenders each firm bid for}} * 100 \quad \frac{\sum \text{awards}}{\sum \text{all awards for all tenders}} * 100$
Interpretation	Companies with a low success rate close to zero (always submit bids but never win) or a high success rate (always win the tender) can suggest a suspicious bidding pattern and possible bid rigging. For example, perennial losing bidders give the appearance of legitimate competition when they have no intention of actually winning and issuance of multiple contracts to one supplier during a discrete time period could be evidence of favoritism or cronyism.
Data needed	Suppliers of each award awards/suppliers/name Tenderers of each award bids/details/tenderers/name It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data.

Procuring entities that issue two awards to same company below procurement threshold

Effort	Medium (not possible with current dataset, requires regular scraping)
Description	No. of procuring entities that issue two awards to the same company for the same/similar item below procurement threshold.
Considerations & challenges	Suppliers that are awarded 2 bids of a similar value can be identified through the data catalogue. However, <ul style="list-style-type: none"> As procuring entities aren't published with awards or closed tenders, the bid number must be used to link to the tender advert (which is only available during the tender period). The item would need to be established through interpretation of the award description or through the PDF documents attached to the tender advert.
Formula	For each supplier: $\text{if value of award } a \text{ and award } b < \text{threshold, return true}$
Interpretation	Split purchases to prevent suspicion generated from large awards.
Data needed	Award identifier awards/suppliers/id Procuring entity tender/procuringEntity/name Award value awards/value/amount

Procuring entities that issue two awards to same company where the second award is x% larger than the first

Effort	High (not possible with current dataset, requires regular scraping)
Description	No. of procuring entities that issue two awards to the same company for the same/similar item where the second award is X% larger than the first.
Considerations & challenges	<ul style="list-style-type: none"> As procuring entities aren't published with awards or closed tenders, the bid number must be used to link to the tender advert (which is only available during the tender period). The item would need to be established through interpretation of the award description or through the PDF documents attached to the tender advert.
Formula	For each supplier: $\text{if } \frac{\text{value of award } b - \text{value of award } a}{\text{value of award } b} * 100 > x\%, \text{ return true}$
Interpretation	Small initial purchase from supplier followed by much larger purchases (first purchase is to test whether it will be accepted).
Data needed	Award identifier awards/suppliers/name Procuring entity tender/procuringEntity/name Award value awards/value/amount

5.3. Available Fields: PDF

Several fields are published within PDFs either on the eTenders portal, the National Treasury website or the Office of the Chief Procuring Officer website. On the eTenders Portal, PDFs are published with the tender advert. These include the tender advert document details unique to that tender including the scope of work / items required, along with the legislatively required compliance documents. These documents are not named in a standardised way and, while there are certain standardised forms, the way the forms are compiled is haphazard. Some forms are scanned PDFs. This makes scraping these PDFs difficult.

On the Office of the Chief Procuring Officer's website, the following documents for national departments and public entities are published quarterly via PDF:

- Bid Opportunities (contains upcoming bids);
- Deviations (contains information on awards for which the competitive tender process was bypassed in favour of a sole-source award);
- Expansions (contains information on contract expansions/extensions)⁹.

The OCPO documents are in standardised tables and are named in a standardised way. The National Treasury website contains a list of blacklisted suppliers and recommended price lists for certain supplies (for example, [Covid-19 PPE price list](#)). Unlike the OCPO documents, links to the documents are not provided on eTenders and they are substantially more difficult to locate. PDF documents are not being scraped as part of this project, however, a list of fields available within the PDF documents described above are provided in the table below.

Section	Field Path	Definition
At the planning stage, the following information may be provided, in addition to general information		
Parties	Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured	
	planning/entity/name	Common name: A common name for this organization or other participant in the contracting process. The identifier object provides a space for the formal legal name, and so this may either repeat that value, or may provide the common name by which this organization or entity is known. This field may also include details of the department or sub-unit involved in this contracting process.
	planning/contactName	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	planning/contactTelephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	planning/contactEmail	Email: The e-mail address of the contact point/person.
Milestones	Milestones: The following milestone information is published at the planning stage.	
	planning/tender/period/startDate	The date the entity plans to publish the tender
	planning/tender/period/endDate	The date the entity plans to close the tender
	planning/awardDate	The date the entity plans to make the award

⁹ The OCPO also publishes detailed information on tender adverts, bidders and contracts for transversal tenders (tenders where National Treasury procures on behalf of a variety of departments/entities), however, due to their limited nature, they have not been included in the field and indicator analysis.

At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
Tender Process	tender/procurementMethod	Procurement method: The procurement method, from the closed method codelist.
	tender/procurementMethodDetails	Procurement method details: Additional detail on the procurement method used. This field can be used to provide the local name of the particular procurement method used.
	tender/procurementMethodRationale	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	tender/awardCriteria	Award criteria: The award criteria for the procurement, using the open awardCriteria codelist.
	tender/preferencePointsSystem	80/20 or 90/10
	tender/awardCriteriaDetails	Award criteria details: Any detailed or further information on the award or selection criteria.
	tender/requestedSupplier'sPerformanceRecords	Were the suppliers performance records requested in the tender documents? e.g. reference letters
	tender/eligibilityCriteria	Eligibility criteria: A description of any eligibility criteria for potential suppliers.
	tender/pre-qualificationCriteria	Was there any pre-qualification criteria (i.e before bidding)
	tender/requestedSamples	Were samples of goods requested as part of the tender process?
	tender/legalInstrument	What is the legal instrument listed? i.e. Preferential Procurement Policy Framework Act 2000
	tender/proposedPublicAndPrivatePartnership	Was it proposed in the tender documents that this project could be a public private partnership?
	tender/proposedPublicAndPrivatePartnershipDetails	Details on PPP arrangement proposed
	tender/prebiddingTesting	Pre-bidding testing to be carried out
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions.	
	tender/tenderPeriod/offerValidDurationDays	Number of days for which the bidder's quote must be valid
	Enquiry period: The period during which potential bidders may submit questions and requests for clarification to the entity managing procurement.	
	tender/enquiryPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/enquiryPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/enquiryPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured		
Tender Parties Procuring Entity	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/countryName	Country name: The country name. For example, the United States.
For each item in the tender stage you may provide:		

Tender Items	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.	
	tender/items/description	Description: A description of the goods, services to be provided.
	tender/immovableProperty	Is there immovable property in this contract - this affects things and should be considered in the indicator analysis consult docs on SA process
	tender/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	tender/items/unit/name	Name: Name of the unit. Reference this list .
	Classification: The primary classification for the item. A classification consists of at least two parts: an identifier for the list (scheme) from which the classification is taken, and an identifier for the category from that list being applied.	
	tender/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist. https://www.sars.gov.za/TaxTypes/PAYE/ETI/Pages/SIC-Codes.aspx
	tender/items/classification/id	ID: The classification code taken from the scheme.
	tender/items/classification/description	Description: A textual description or title for the classification code.
	tender/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	tender/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	tender/items/deliveryAddress/region	Region: The region. For example, CA.
	tender/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.
	tender/items/deliveryAddress/countryName	Country name: The country name. For example, the United States.
South African legislation requires standard general conditions of contract and special conditions of contract to be published in the tender documents. These fields are required within these documents.		
General and special conditions of contract	Delay penalties outlined in General Conditions of Contract	Penalties issued to suppliers for delay in delivery of goods and services
	Time of delivery	Time of delivery specified in the contract
	Patent rights	Which party retains the patent of goods and services rendered
	Transportation price outside of all-inclusive-delivery price specified in SCC/GCC?	Is the expected transportation cost of goods stipulated in the GCC/SCC
	Inspections of goods / services outlined in the bid?	Are the conditions for inspecting goods outlined in the GCC/SCC
	Term of warranty	What is the term of warranty for goods supplied
At the contract stage, the following information may be provided (in addition to information from the planning, tender and award stages, and general information)		
Amendment	Amendments: A contract amendment is a formal change to, or extension of, a contract, and generally involves the publication of a new contract notice/release, or some other documents detailing the change.	
	contracts/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	contracts/amendments/value/originalContract	The original contract value

	contracts/amendments/value/ contractExtension	The amended contract value
	contracts/amendments/value/ previousExtension	Whether or not the contract has been amended prior to this amendment
	contracts/amendments/recom mendedByAOorAA	Unsure what AO or AA is
	contracts/amendments/suppo rt	Supported or not supported
	contracts/procuringEntity/nam e	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	contracts/supplier/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.

5.4. Indicator List: PDF

The following 8 additional indicators can be calculated based on information contained within the available PDF documents.

Indicator	Fields Required	Comment_eTenders
Process Rigging		
Supplier receives multiple single-source/non-competitive contracts from a single procuring entity during a calendar year	-awards/suppliers; - contracts/id; - tender/procurementMethod = limited or direct; -tender/procuringEntity	Deviations (notice of sole source awards) are published quarterly in PDF, whereas awards are published consistently in HTML. Deviations are only published for national entities.
Key tender documents are not available through online platform during tender period	-tender/documents; - tender/tenderPeriod/startDate; - tender/tenderPeriod/endDate	Tender documents are available via a variety of methods, including from a particular office, or website, or attached to the advert listing on eTenders. It is possible to manually follow these links for each listing to confirm if they are there and which documents are available, but not possible via scraping.
Change orders (amendments) increase price beyond initial contract price (or some % above initial contract price) when contract is sole source and within 5% of bid threshold	- contracts/value/amount ; -tender/procuringEntity; awards/suppliers; - contracts/implementation/transactions/amount/amount; - tender/procurementMethodDetails	Deviations (notice of sole source awards) and contract extensions are published quarterly in PDF on the OCPO website. Deviations and extensions are only published for national entities. Since, there is no tender/award/contract id provided on both the expansion and deviation PDFs, it is difficult to link sole source awards to price expansions (i.e. link across PDFs). Frequent scrapes together with keyword searches would be required. Thresholds for national procurement are Under R500,000 (compare 3 quotes) and over R500,000 (formal tender process).

Percent of tenders and value awarded by means of competitive procedures and sole source procedures	-tender/procuringEntity; - tender/procurementMethod; -award/value/amount	Deviations (notice of sole source awards) are published quarterly in PDF on the OCPO website, whereas awards are published consistently in HTML. Deviations are only published for national entities. Segmenting by date and procuring entities will be difficult because they are not published with the awards release.
Public Integrity		
Percent of tenders with linked procurement plans	- tender/documents/documentType (=procurementPlan)	National Treasury publishes tenders to be advertised quarterly via PDF on the OCPO website. There is no tender number so key words on the description/institution/contact person would need to be used together with the dates as potential parameters to track plans to adverts.
Frequency of use of amendments in contracting phase (disaggregated by reason, supplier and procuring entity)	-tender/id -tender/procuringEntity -contracts/id - contracts/amendments/rationale - contracts/procuringEntity/name	Amendments are published quarterly via the OCPO website in PDF. There is no tender/id published but the entity is published. Some amendments are published quarterly in PDF via OCPO website but no other contracts are published, which means that one cannot calculate total contracts in order to identify a percentage
Transparency & Disclosure of Procurement Process		
Supplier blacklist published and updated [regularly] - Number of suppliers on blacklist	- tenders/suppliers/id - blacklist ID (extension)	The National Treasury publishes a list of blacklisted suppliers but it is squirreled away on their website and it is unclear how often it is updated. See: http://www.treasury.gov.za/publications/other/Database%20of%20Restricted%20Suppliers.PDF and https://vulekamali.gov.za/datasets/procurement-portals-and-resources/blacklisted-suppliers
Percent of tenders that do not include detailed item codes or item descriptions	- tender/id; - tender/items/id - tender/items/description OR tender/items/classification/id	Items are not published in a standard format across tenders. Assessing this indicator would require high effort.

5.5. Missing fields

Substantial information recommended in the OCDS is not published via the eTenders portal. The following fields are not published in either HTML or PDF by eTenders i.e. this information is not public. In addition to the below, there is no information on the implementation phase published. Priority missing fields are highlighted for inclusion within the recommendations for this portal.

Section	Field Path	Definition
At the planning stage, the following information may be provided, in addition to general information		
Planning	planning/rationale	Rationale: The rationale for the procurement provided in free text. More detail can be provided in an attached document.
Budget	Budget: Details of the budget that funds this contracting process.	
	planning/budget/description	Budget Source: 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/project	Project title: The name of the project through which this contracting process is funded (if applicable). Some organizations maintain a registry of projects, and the data should use the name by which the project is known in that registry. No translation option is offered for this string, as translated values can be provided in third-party data, linked from the data source above.
	planning/budget/projectID	Project identifier: An external identifier for the project that this contracting process forms part of, or is funded via (if applicable). Some organizations maintain a registry of projects, and the data should use the identifier from the relevant registry of projects.
Amount	Amount: The value reserved in the budget for this contracting process.	
	planning/budget/amount/amount	Amount: Amount as a number.
	planning/budget/amount/currency	Currency: The currency of the amount, from the closed currency codelist.
At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
Tender Period	tender/tenderPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/tenderPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
	Evaluation and award period: The period for decision making regarding the contract award.	
	tender/awardPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/awardPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/awardPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/awardPeriod/durationInDays	Duration (days): The maximum duration of this period in days.
	Contract period: The period over which the contract is estimated or required to be active.	

	tender/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/contractPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days.
Enquiry period: The period during which potential bidders may submit questions and requests for clarification to the entity managing procurement.		
	tender/enquiryPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/enquiryPeriod/durationInDays	Duration (days): The maximum duration of this period in days.
When you have received all proposals, a tenderUpdate release may include a tenderers section with cross references to the parties section.		
Tenderers	tender/numberOfTenderers	Number of tenderers: The number of parties who submit a bid.
	tender/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
When a tenderUpdate release amends the previous call for tenders it is recommended to provide the following information to make explicit that an amendment has been provided		
Tender Amendments	Amendments: A tender amendment is a formal change to the tender, and generally involves the publication of a new tender notice/release. The rationale and a description of the changes made can be provided here.	
	tender/amendments/date	Amendment date: The date of this amendment.
	tender/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	tender/amendments/rationale	Rationale: An explanation for the amendment.
At the award stage, the following information may be provided (in addition to information from the planning and tender stages, and general information)		
	Contract period: The period for which the contract has been awarded. Key events during a contracting process may have a known start date, end date, duration, or maximum	
	awards/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	awards/contractPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	awards/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days.
	awards/datePublished	Date the award was publically published by the publisher
Suppliers	Suppliers: The suppliers awarded this award. If different suppliers have been awarded different items or values, these should be split into separate award blocks.	
Address	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/postalCode	Postal code: The postal code. For example, 94043.
	parties/address/countryName	Country name: The country name. For example, the United States.

Contact point	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
For each line item you may provide the following details		
Awards Items	Items awarded: The goods and services awarded in this award, broken into line items wherever possible. Items should not be duplicated, but the quantity specified instead.	
	awards/items/description	Description: A description of the goods, services to be provided.
	awards/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	awards/items/unit/name	Name: Name of the unit. According to OCDS recommended classification system: UN/CEFACT Recommendation 20
	awards/items/classification/countryOf Origin	The place where the goods were mined, grown or produced or from which the services are supplied
	Additional classifications: An array of additional classifications for the item.	
	awards/items/additionalClassifications /scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	awards/items/additionalClassifications /id	ID: The classification code taken from the scheme.
	awards/items/additionalClassifications /description	Description: A textual description or title for the classification code.
	awards/items/additionalClassifications /uri	URI: A URI to uniquely identify the classification code.
	Value: The monetary value of a single unit. Financial values should be published with a currency attached.	
	awards/items/unit/value/amount	Amount: Amount as a number.
	awards/items/importedContentValue/ amount	Amount in currency (rands) of the contract price that will be spent on imported items
	awards/items/localContentValue/amo unt	Amount in currency (rands) of the contract price that will be spent on locally manufactured items
	awards/items/deliveryAddress/streetA ddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	awards/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	awards/items/deliveryAddress/region	Region: The region. For example, CA.
	awards/items/deliveryAddress/postalC ode	Postal code: The postal code. For example, 94043.
	awards/items/deliveryAddress/countr yName	Country name: The country name. For example, the United States.
When a awardUpdate release amends a previous award it is recommended to provide the following information to make explicit that an amendment has been provided		
Awards Amendm ent	Amendments: An award amendment is a formal change to the details of the award, and generally involves the publication of a new award notice/release. The rationale and a description of the changes made can be provided here.	
	awards/amendments/date	Amendment date: The date of this amendment.
	awards/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	awards/amendments/rationale	Rationale: An explanation for the amendment.

When unsolicited bids are received by the procuring entity		
Unsolicited Bids	unsolicitedBids/publisher	Publisher of the unsolicited bid details (entity name)
	unsolicitedBids/reasonsForDenial	Reasons for not accepting the unsolicited bid
	unsolicitedBids/datePublished	Date the unsolicited bid details were published
Bids: The bid extension allows bid statistics, and detailed bid information to be represented in the bid section. Awards can be related to a specific bid.		
Tenderer	Tenderer: The party, or parties, responsible for this bid. This should provide a name and identifier, cross-referenced to an entry in the parties array at the top level of the release.	
	bids/details/tenderers/id	Organization ID: The id of the party being referenced. This must match the id of an entry in the parties section.
	bids/details/date	Date: The date when this bid was received.
At the contract stage, the following information may be provided (in addition to information from the planning, tender and award stages, and general information)		
Contract information	contracts/id	Contract ID: The identifier for this contract. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	contracts/description	Contract description: Contract description
Period	Period: The start and end date for the contract.	
	contracts/period/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	contracts/period/endDate	End date: The end date for the period. When known, a precise end date must be provided.
Value	Value: The total value of this contract.	
	contracts/value/amount	Amount: Amount as a number.
	contracts/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Items	Items contracted: The goods, services, and any intangible outcomes in this contract. Note: If the items are the same as the award do not repeat.	
	contracts/items/description	Description: A description of the goods, services to be provided.
	contracts/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	contracts/items/unit/name	Name: Name of the unit.
	contracts/items/unit/id	ID: The identifier from the codelist referenced in the scheme property. Check the codelist for details of how to find and use identifiers from the scheme in use.
	contracts/items/unit/scheme	Scheme: The list from which identifiers for units of measure are taken, using the open unitClassificationScheme codelist. 'UNCEFACT' is recommended.
	Classification: The primary classification for the item.	
	contracts/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	contracts/items/classification/id	ID: The classification code taken from the scheme.
	contracts/items/classification/description	Description: A textual description or title for the classification code.
	contracts/items/unit/value/amount	Amount: Amount as a number.
	contracts/items/unit/value/currency	Currency: The currency of the amount, from the closed currency codelist.

Amendment	Amendments: A contract amendment is a formal change to, or extension of, a contract, and generally involves the publication of a new contract notice/release, or some other documents detailing the change. The rationale and a description of the changes made can be provided here.	
	contracts/amendments/id	ID: An identifier for this amendment: often the amendment number
	contracts/amendments/date	Amendment date: The date of this amendment.

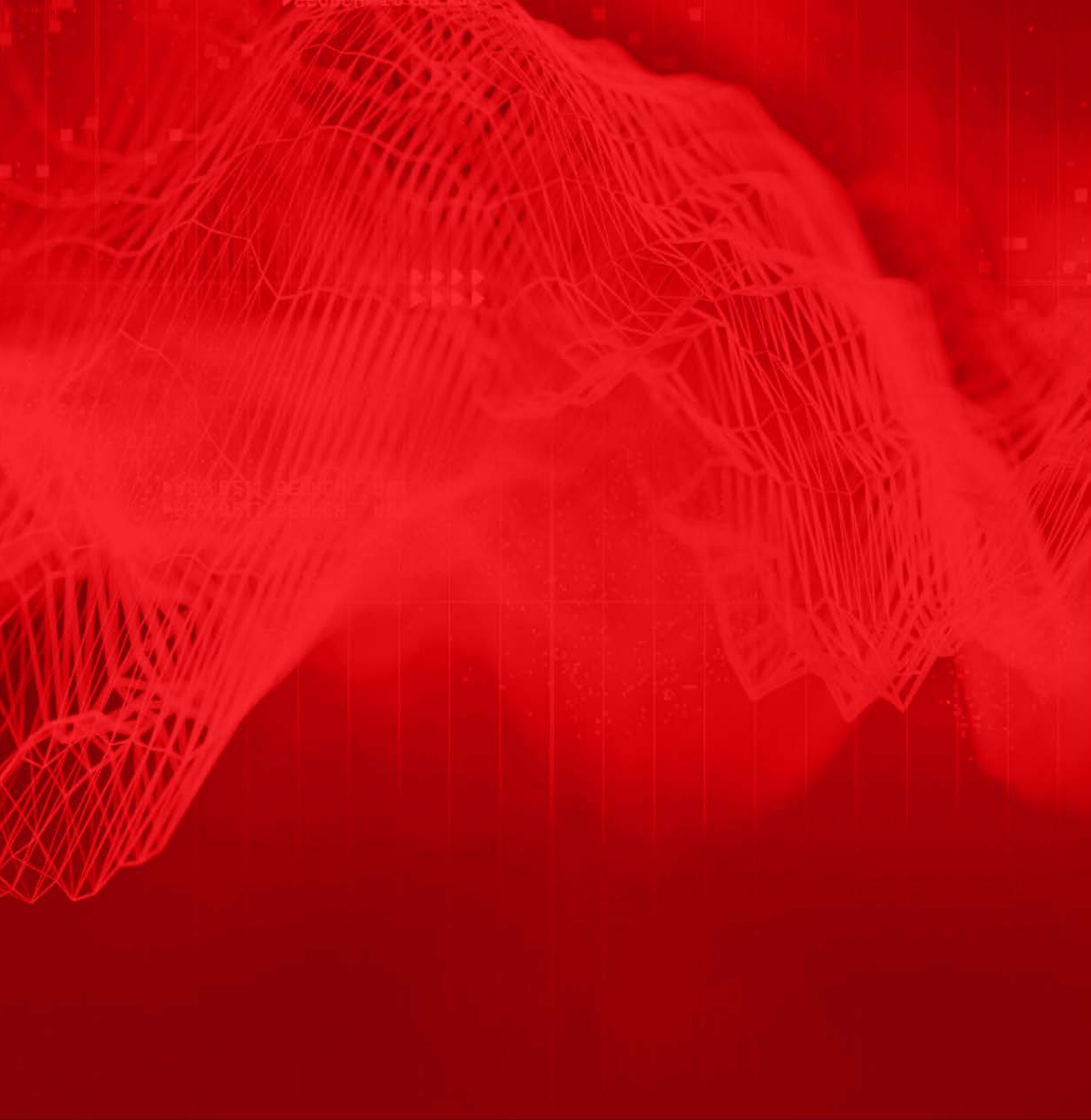
5.6. Missing Indicators

The following 31 indicators would be possible if all OCDS recommended fields were published.

Indicator	Fields Required	Comment_eTenders
Collusion		
Variation X% greater than mean for bid prices on similar items	-tender/items	No itemised information is published.
The percent gap between 2 bids by the same bidder for similar items is: Greater than 20% (soft threshold); Greater than 30% (rigid threshold).	-awards/value/amount; -bid/statistics/value -awards/items/unit/value/amount	No way to compare 2 similar tenders due to items not being published. Description not sufficient to understand details of the bid.
Persistently high or increasing bid prices compared to cost estimates, price lists or previous prices for similar jobs or industry averages	- tender/value/amount - tender/items/value/amount - tender/procurementEntity - bid/statistics/value	Cost estimates, price lists, previous prices and industry averages for items are all not published.
Days from bid plan approval to tender period start date	- tender/id - planning/bidPlan/approval (extension) - tender/tenderPeriod/startDate	Bid plan approval not published
Efficiency of Procurement Process		
Days from tender start to award date	- tender/id - awards/id - tender/tenderPeriod/startDate - awards/date	No award date published, necessitating frequent scraping.
Days from contract signing to implementation end	- contracts/id - contracts/period/startDate - contracts/period/endDate	Contract and implementation information not published.
% of procurements whose implementation times comply with legal requirements	- Results of above indicators - Thresholds for legally required start/end periods for each phase	Implementation information not published.
Frequency of use of amendments in tender phase	- tender/id - tender/amendments/id - tender/amendments/description	There are no standard amendments fields/notices - very difficult to tell what is an amendment and what isn't. Often it is described in the tender description in the tender adverts release.
% of procurements in which payment is made at least 60 days after last milestone complete	- contract/id - contract/implementation/milestones - contract/period/endDate - contract/status	No implementation milestone / payment details published.
Days from tender close to award date	tender/id tender/tenderPeriod/endDate awards/date	No information on award decision published

Days from award date to start of implementation	awards/id awards/date awards/contractPeriod/startDate	No award date and contract start date published
Percent of contracts which are canceled	contracts/id contracts/status	Contract cancellations not published
Fraud		
Winning supplier's address is a PO Box (consider: Address of payment is PO Box)	parties/address (supplier) or parties/address/streetAddress	Winning supplier's address is not published on eTenders
Market Opportunity / Competitiveness		
Share of contracts awarded to small and medium-size enterprises (SMEs)/ Total amount of contracts awarded to SMEs	- contract/id - contract/value - SME data field (extension)	Insufficient information published. Potential to use BBBEE points claimed.
Share of contracts awarded to international companies vs. local firms	- contract/id - parties/address/countryName (suppliers)	Information not published.
Mean number of bidders by item type	-tender/id -tender/tenderers/identifier/id -tender/items/id	No details available per item at bid or award release. Details on items contained within the bid advert document only .
Process Rigging		
Procurement plan recommends against sole source; sole source ultimately used	-procurementMethodDetails	Procurement plan (bid opportunities PDF on OCPO website) does not state where sole source awards are recommended.
Supplier receives multiple sole source awards approved by same official	awards/suppliers; tender/procurementMethodDetails	eTenders notes 'single source' under reason for deviation on quarterly deviations PDF published on OCPO website. No details on the official involved are included, only procuring entities.
Difference between award and contract amount is greater than X%	awards/value/amount; contracts/value/amount	Contract values are not published on eTenders.
Complaint = changes to bids, winning bidder was involved in contracting process, winning bidder was involved in contracting process	- complaints ID (extension)	Complaints not published
Lowest bidder does not meet award criteria	tender/tenderers	It is very rare in the data where the points are missing but the bid price is still published. Where that is the case, it is more likely that the points just haven't been captured rather than being disqualified.
Public Integrity		
% of tenders that use the planned procurement method	- tender/id - planning/procurementMethod (extension) - tender/procurementMethod	Planned procurement method not published.

Publication of contracts (when an award has been made)	awards/id awards/date contracts/id contracts/documents/documentType (=contractNotice)	Contracts and date of awards are not published on eTenders (except for transversal contracts)
Transparency & Disclosure of Procurement Process		
Percent of contracts which publish contract implementation details (physical and financial)	contracts/implementation/transactions/id contracts/implementation/transactions/amount contracts/implementation/transactions/currency	Contracts are not published on eTenders
No. of complaints received (total, per PE/per time period) & percent of tenders w/ complaints	- tender/id - tender/procuringEntity - Number of complaints (extension)	Complaints aren't published
No. & percent of complaints resolved (total, per PE/per time period/time it takes to resolve)	- tender/id - tender/procuringEntity - complaints ID (extension) - answers ID (extension)	Complaints aren't published
The names of bidders in an advertised competitive bid – and where practical- the total price and any preference claimed by the bidders are published within 10 working days after the bid closed and remain on the website for at least 30 days	-tender/id -bids/details/tenderers/name -bids/details/value/amount -bid/details/bbbeePointsClaimed -bid/details/datePublished	eTenders only publishes the details of tenderers with the award release and it is not dated.
Value for Money		
Percent of contracts that exceed budget and mean percent overrun (and vice versa: percent of contracts that are completed on time and to budget).	-contracts/status -planning/budget/amount/amount -awards/value/amount -contracts/implementation/transactions/amount -contracts/id -contracts/period/endDate -contracts/implementation/milestones/dueDate -contracts/implementation/milestones/dateMet	Contract extensions are published quarterly in PDF via the OCPO. However, a percentage could not be calculated because only amendments are published - not a total amount. An analysis could be done on the mean per entity and supplier.
Total percent savings (difference between tender value / budget estimate and contract value)	-tender/id -tender/value/amount OR planning/budget/amount -contracts/id -contracts/value/amount	Insufficient information published. Too difficult to link projects from planning to contract stage.
Amount of cancelled funding at the contract stage by cancellation reason	- tender/id - tender/status - tender/value - contracts/id - contract/status - contracts/value - cancellation reason (extension required)	Value not published at the cancellation release. Contract cancellations not published at all.
% difference in final payment amount vs. contract amount	- contracts/value/amount - contracts/implementation/transactions/	Contract and payment information not published.



Annexure 6



Annexure 6: North West DoH website

A detailed overview of information published on the North West DoH website is provided below, along with potential indicators. All fields and indicators, together with their availability and various categorisations are available in spreadsheet format [here](#). This sheet will be expanded throughout the 3 deep dives.

6.1. Available Fields: HTML

The NorthWest Province publishes some basic information in HTML at the advertised tender stage and awards stage. However, there are only 11 awards published from January to December of 2017 and so because this information is very limited it has been considered missing for the purpose of this report. The table below provides the fields that are available. The text in purple represents commentary on diversion from the OCDS fields and additions to the OCDS fields based on the South African context.

	Field Path	Definition
At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
Tender	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	tender/title	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/applicationAquisition	In person, email request or electronic portal
	tender/applicationAquisitionDetails	Address where a person can get the application
	tender/submissionMethod	Submission method: The methods by which bids are submitted, using the open submissionMethod codelist.
	tender/submissionMethodDetails	Submission method details: Any detailed or further information on the submission method. This can include the address, e-mail address or online service to which bids are submitted, and any special requirements to be followed for submissions.
	tender/briefingSession	Is there a compulsory briefing for this tender?
	tender/briefingDate	Date the briefing session is scheduled for
	tender/briefingAddress	Address where the briefing session will take place
	tender/briefingTime	Time the briefing session is scheduled for
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions. Key events during a contracting process	

	may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/tenderPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided. Note: For the purposes of this report, the date the tender advert is published on the eTenders portal is considered to be the start date.
	tender/tenderPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/tenderPeriod/endTime	End time: The end date for the period. When known, a precise end date must be provided.
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured		
Tender Parties Procuring Entity	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/countryName	Country name: The country name. For example, United States.
	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
For each item in the tender stage you may provide:		
Tender Items	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.	
	tender/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	tender/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	tender/items/deliveryAddress/region	Region: The region. For example, CA.
	tender/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.

6.2. Indicator List: HTML

Given the above available fields, only 3 indicators are possible.

Efficiency of Procurement Process

Percentage of tenders using electronic bidding

Effort	Low
Description	The percentage of tenders that allow for bids to be submitted electronically.
Considerations & challenges	None
Formula	$\text{percent of tenders} = \frac{\sum \text{number of tenders using electronic bidding}}{\text{Total number of tender adverts}} * 100$
Interpretation	Allowing electronic submissions can result in more efficient bid processing and reduces the cost (time and money) placed on bidders.
Data needed	Tender number: tender/id Tender submission method: tender/submissionMethod

Process Rigging

Tendering period less or more than 21 days

Effort	Low
Description	Number of days between the tender start date and its closing date.
Considerations & challenges	National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3. Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.
Formula	$\text{duration} = \text{Tender period end date} - \text{Tender period start date}$ $\text{mean}(\text{duration})$ $\text{median}(\text{duration})$
Interpretation	Allowing an unreasonably short time to respond to requests for bids can reduce competition. A tender period of more than 21 days may signal inefficiencies.
Data needed	Tender start date: tender/tenderPeriod/startDate Tender end date: tender/tenderPeriod/endDate

Transparency & Disclosure of Procurement Process

% of tender adverts that don't publish basic tender information

Effort	Low
Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include: (a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)</p> <p>The legal requirement to publish this data is for the eTender Publication Portal only but it is still a useful descriptive indicator for the NorthWest portal. Especially if there are tenders published on the NorthWest Portal that aren't available on eTenders (tbd during the comparative analysis phase). Tender document meta-data is not published but it is indicated where the documents can be found (generally eTenders or at the offices).</p>
Considerations & challenges	The bid documents published cannot be ascertained via the data catalogue, however, all other requirements can be. Can be calculated per year for all categories and procuring entities, or segmented.
Formula	<p>For each tender information category, for all tender adverts:</p> $count\ where\ tender\ information\ category = false$ $percent\ of\ tenders = \frac{\sum count(false)}{Total\ number\ of\ tenders\ advertised} * 100$
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.
Data needed	<p>Tender description tender/description</p> <p>Tender Number tender/id</p> <p>Procuring entity name tender/procuringEntity/name</p> <p>Place where good or services will be delivered/implemented tender/items/deliveryLocation/description</p> <p>Closing date and time of tender advert tender/tenderPeriod/endDate & endTime</p> <p>Contact details of tender contact point parties/contactpoint/name & email & telephone & faxNumber</p> <p>Where the tender documents are available from</p>

6.3. Available Fields: PDF

Several fields are published within PDFs on the NorthWest Portal. These PDFs are published under Tender Responses, Amended Tenders and Cancelled Tenders on the portal. These include:

- 12 lists of bidders-including names of responded bidders, tender ID, bid description and very rarely the bid prices
- 2 amended tenders- including tender ID, bid description, initial and amended closing dates
- 2 cancelled tenders- including tender ID and bid descriptions of cancelled tenders

However, the forms are scanned PDFs which makes scraping these PDFs difficult. In addition there are very few, outdated PDFs and so there is insufficient information to be able to calculate any indicators. Therefore, for the purpose of this report the PDF fields have been recorded as missing.

6.4. Missing fields

Substantial information recommended in the OCDS is not published via the NorthWest portal. The following fields are not published i.e. this information is not public. In addition to the below, there is no information on the implementation phase published. Priority missing fields are highlighted for inclusion within the recommendations for this portal.

	Field Path	Definition
At the planning stage, the following information may be provided, in addition to general information		
Planning	planning/rationale	Rationale: The rationale for the procurement provided in free text. More detail can be provided in an attached document.
Budget	Budget: Details of the budget that funds this contracting process. This section contains information about the budget line, and associated projects, through which this contracting process is funded. It draws upon the data model of the Fiscal Data Package, and should be used to cross-reference to more detailed information held using a Budget Data Package, or, where no linked Budget Data Package is available, to provide enough information to allow a user to manually or automatically cross-reference with another published source of budget and project information.	
	planning/budget/description	Budget Source: 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/project	Project title: The name of the project through which this contracting process is funded (if applicable). Some organizations maintain a registry of projects, and the data should use the name by which the project is known in that registry. No translation option is offered for this string, as translated values can be provided in third-party data, linked from the data source above.
	planning/budget/projectID	Project identifier: An external identifier for the project that this contracting process forms part of, or is funded via (if applicable). Some organizations maintain a registry of projects, and the data should use the identifier from the relevant registry of projects.

Amount	Amount: The value reserved in the budget for this contracting process. A negative value indicates anticipated income to the budget as a result of this contracting process, rather than expenditure. Where the budget is drawn from multiple sources, the budget breakdown extension can be used. Financial values should be published with a currency attached.	
	planning/budget/amount/amount	Amount: Amount as a number.
	planning/budget/amount/currency	Currency: The currency of the amount, from the closed currency codelist.
Parties	Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured	
	planning/entity/name	Common name: A common name for this organization or other participant in the contracting process. The identifier object provides a space for the formal legal name, and so this may either repeat that value, or may provide the common name by which this organization or entity is known. This field may also include details of the department or sub-unit involved in this contracting process.
	planning/contactName	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	planning/contactTelephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	planning/contactEmail	Email: The e-mail address of the contact point/person.
Milestones	Milestones: The following milestone information is published at the planning stage.	
	planning/tender/period/startDate	The date the entity plans to publish the tender
	planning/tender/period/endDate	The date the entity plans to close the tender
	planning/awardDate	The date the entity plans to make the award
At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
Tender Process	tender/procurementMethod	Procurement method: The procurement method, from the closed method codelist.
	tender/procurementMethodDetails	Procurement method details: Additional detail on the procurement method used. This field can be used to provide the local name of the particular procurement method used.
	tender/procurementMethodRationale	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/awardCriteria	Award criteria: The award criteria for the procurement, using the open awardCriteria codelist.
	tender/preferencePointsSystem	80/20 or 90/10
	tender/awardCriteriaDetails	Award criteria details: Any detailed or further information on the award or selection criteria.
	tender/requestedSupplier'sPerformanceRecords	Were the suppliers performance records requested in the tender documents? e.g. reference letters
	tender/eligibilityCriteria	Eligibility criteria: A description of any eligibility criteria for potential suppliers.
	tender/pre-qualificationCriteria	Was there any pre-qualification criteria (i.e before bidding)
	tender/requestedSamples	Were samples of goods requested as part of the tender process?
	tender/legalInstrument	What is the legal instrument listed? i.e. Preferential Procurement Policy Framework Act 2000

	tender/proposedPublicAndPrivatePartnership	Was it proposed in the tender documents that this project could be a public private partnership?
	tender/proposedPublicAndPrivatePartnershipDetails	Details on PPP arrangement proposed
	tender/prebiddingTesting	Pre-bidding testing to be carried out
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/tenderPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/tenderPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
	tender/tenderPeriod/offerValidDurationDays	Number of days for which the bidder's quote must be valid
	Evaluation and award period: The period for decision making regarding the contract award. The end date should be the date on which an award decision is due to be finalized. The start date may be used to indicate the start of an evaluation period. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/awardPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/awardPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/awardPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/awardPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
	Contract period: The period over which the contract is estimated or required to be active. If the tender does not specify explicit dates, the duration field may be used. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.

	tender/contractPeriod/maximumExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maximumExtentDate are set, this field, if used, should be equal to the difference between startDate and maximumExtentDate.
Enquiry period: The period during which potential bidders may submit questions and requests for clarification to the entity managing procurement. Details of how to submit enquiries should be provided in attached notices, or in submissionMethodDetails. Structured dates for when responses to questions will be made can be provided using tender milestones. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.		
	tender/enquiryPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/enquiryPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/enquiryPeriod/maximumExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	tender/enquiryPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maximumExtentDate are set, this field, if used, should be equal to the difference between startDate and maximumExtentDate.
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured		
Tender Parties Procuring Entity	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/url	URL: A web address for the contact point/person.
When you have received all proposals, a tenderUpdate release may include a tenderers section with cross references to the parties section.		
Tenderers	tender/numberOfTenderers	Number of tenderers: The number of parties who submit a bid.
	tender/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
Use the codelist mapping template to map the documents in your system to the documents recommended for publication as part of an open contracting implementation.		
For each document related to the tender stage you may provide:		
Tender Document Meta-data	Documents: All documents and attachments related to the tender, including any notices. See the documentType codelist for details of potential documents to include. Common documents include official legal notices of tender, technical specifications, evaluation criteria, and, as a tender process	

	progresses, clarifications and replies to queries.	
	tender/documents/documentType	Document type: A classification of the document described, using the open documentType codelist.
	tender/documents/title	Title: The document title.
	tender/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	tender/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
	tender/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	tender/documents/dateModified	Date modified: Date that the document was last modified
	tender/documents/format	Format: The format of the document, using the open IANA Media Types codelist (see the values in the 'Template' column), or using the 'offline/print' code if the described document is published offline. For example, web pages have a format of 'text/HTML'. https://www.iana.org/assignments/media-types/media-types.xhtml
	tender/documents/language	Language: The language of the linked document using either two-letter ISO639-1, or extended BCP47 language tags. The use of lowercase two-letter codes from ISO639-1 is recommended unless there is a clear user need for distinguishing the language subtype.
	tender/documents/publisherName	List of all portals document is published on
For each item in the tender stage you may provide:		
Tender Items	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.	
	tender/immovableProperty	Is there immovable property in this contract - this affects things and should be considered in the indicator analysis consult docs on SA process
	tender/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	tender/items/unit/name	Name: Name of the unit. Reference this list .
	Classification: The primary classification for the item. A classification consists of at least two parts: an identifier for the list (scheme) from which the classification is taken, and an identifier for the category from that list being applied. It is useful to also publish a text label and/or URI that users can draw on to interpret the classification.	
	tender/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist. https://www.sars.gov.za/TaxTypes/PAYE/ETI/Pages/SIC-Codes.aspx
	tender/items/classification/id	ID: The classification code taken from the scheme.
	tender/items/classification/description	Description: A textual description or title for the classification code.

Tender Participation Fees	Participation fees: Any fees applicable to bidders wishing to participate in the tender process. Fees may apply for access to bidding documents, for the submission of bids or there may be a win fee payable by the successful bidder.	
	tender/participationFees/methodOfPayment	Method(s) of payment: Optional information about the way in which fees can be paid.
	Value: The monetary value of this fee.	
	tender/participationFees/value/amount	Amount: Amount as a number. <i>Note: The field on eTenders referenced here always relates to the cost of the bid documents only.</i>
	tender/participationFees/value/currency	Currency: The currency of the amount, from the closed currency codelist. https://drive.google.com/open?id=1UThR89OLMq3uWmy0q4q58SBI3O0WJ6X8
	tender/participationFees/type	Fee type: A fee applicable to bidders wishing to participate in the tender process. Fees may apply for access to bidding documents, for the submission of bids or there may be a win fee payable by the successful bidder.
	tender/participationFees/description	Description: Optional information about the way in which fees are levied, or the exact nature of the fees.
	tender/participationFees/totalBidCost	Any costs involved with bidding
	tender/participationFees/totalProcurementCosts	Costs of the whole process - amendments, contract costs, inspection costs etc, any costs that a supplier must incur to participated in the bidding process
South African legislation requires standard general conditions of contract and special conditions of contract to be published in the tender documents. These fields are required within these documents.		
General and special conditions of contract	Delay penalties outlined in General Conditions of Contract	Penalties issued to suppliers for delay in delivery of goods and services
	Time of delivery	Time of delivery specified in the contract
	Patent rights	Which party retains the patent of goods and services rendered
	Transportation price outside of all-inclusive-delivery price specified in SCC/GCC?	Is the expected transportation cost of goods stipulated in the GCC/SCC
	Inspections of goods / services outlined in the bid?	Are the conditions for inspecting goods outlined in the GCC/SCC
	Term of warranty	What is the term of warranty for goods supplied
When a tenderUpdate release amends the previous call for tenders it is recommended to provide the following information to make explicit that an amendment has been provided		
Tender Amendments	Amendments: A tender amendment is a formal change to the tender, and generally involves the publication of a new tender notice/release. The rationale and a description of the changes made can be provided here.	
	tender/amendments/date	Amendment date: The date of this amendment.
	tender/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	tender/amendments/rationale	Rationale: An explanation for the amendment.
Update release once the tender has closed. Tenders move from the 'advertised tenders' section to the 'closed tenders' section of the portal on the closing date.		
Closed Tenders	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.

	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.
	tender/tenderPeriod/startDate	Date the tender was advertised
	tender/tenderPeriod/endDate	Date the tender was closed
Update release if the tender is cancelled. Tenders move from the 'advertised tenders' section to the 'cancelled tenders' section of the portal.		
Cancelled tenders	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender. It is assumed that the reference number provided matches the tender advert but further investigation is required.
	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	tender/cancellationRationale	Reason for cancelling the tender
At the award stage, the following information may be provided (in addition to information from the planning and tender stages, and general information)		
Award information	awards/id	Award ID: The identifier for this award. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	awards/description	Description: Award description
	awards/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
Contract period: The period for which the contract has been awarded. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.		

	awards/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	awards/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	awards/contractPeriod/maximumExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	awards/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maximumExtentDate are set, this field, if used, should be equal to the difference between startDate and maximumExtentDate.
	awards/datePublished	Date the award was publically published by the publisher
Suppliers	Suppliers: The suppliers awarded this award. If different suppliers have been awarded different items or values, these should be split into separate award blocks.	
	awards/suppliers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	awards/suppliers/bbbBEEPoints	Number of BBBEE points claimed by the bidder
	awards/suppliers/totalPointsAwarded	Total points awarded once both price and BBBEE points are calculated
	awards/value/amount	Amount: Amount as a number.
	awards/value/currency	Currency: The currency of the amount, from the closed currency codelist. https://drive.google.com/open?id=1UThR89OLMq3uWmyOq4q58SBI3O0WJ6X8
Directors	The eTender portal publishes the name and start date of all directors of the supplier business.	
	parties/identifier/namesOfDirectors	Names of supplier's directors
	parties/identifier/directorStartDate	Dates when director's started at the company
Address	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/postalCode	Postal code: The postal code. For example, 94043.
	parties/address/countryName	Country name: The country name. For example, United States.
Contact point	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.

	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/url	URL: A web address for the contact point/person.
	parties/publicAndPrivatePartnershipDetails	<ul style="list-style-type: none"> - name private and public partners - tor between the two? - scope of works? - feasibility study - are these documents displayed at the local government offices and on its official website
	Parties/datePPPDetailedPublished	Date any PPP details are published

[Use the codelist mapping template to map the documents in your system to the documents recommended for publication as part of an open contracting implementation.](#)

For each document related to the award stage you may provide:

Awards Documents	Documents: All documents and attachments related to the award, including any notices.	
	awards/documents/documentType	Document type: A classification of the document described, using the open documentType codelist.
	awards/documents/title	Title: The document title.
	awards/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	awards/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
	awards/documentSubmissionDate	Date documents were submitted
	awards/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	awards/documents/dateModified	Date modified: Date that the document was last modified
	awards/documents/format	Format: The format of the document, using the document format open codelist. For example, web pages have a format of 'text/HTML'.
	awards/documents/language	Language: The language of the linked document using lowercase two-letter codes from ISO639-1.

For each line item you may provide the following details

Awards Items	Items awarded: The goods and services awarded in this award, broken into line items wherever possible. Items should not be duplicated, but the quantity specified instead.	
	awards/items/description	Description: A description of the goods, services to be provided.
	awards/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	

	awards/items/unit/name	Name: Name of the unit. According to OCDS recommended classification system: UN/CEFACT Recommendation 20
	awards/items/classification/countryOfOrigin	The place where the goods were mined, grown or produced or from which the services are supplied
Additional classifications: An array of additional classifications for the item.		
	awards/items/additionalClassifications/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	awards/items/additionalClassifications/id	ID: The classification code taken from the scheme.
	awards/items/additionalClassifications/description	Description: A textual description or title for the classification code.
	awards/items/additionalClassifications/uri	URI: A URI to uniquely identify the classification code.
Value: The monetary value of a single unit. Financial values should be published with a currency attached.		
	awards/items/unit/value/amount	Amount: Amount as a number.
	awards/items/importedContentValue/amount	Amount in currency (rands) of the contract price that will be spent on imported items
	awards/items/localContentValue/amount	Amount in currency (rands) of the contract price that will be spent on locally manufactured items
	awards/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	awards/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	awards/items/deliveryAddress/region	Region: The region. For example, CA.
	awards/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.
	awards/items/deliveryAddress/countryName	Country name: The country name. For example, the United States.
When a awardUpdate release amends a previous award it is recommended to provide the following information to make explicit that an amendment has been provided		
Awards Amendment	Amendments: An award amendment is a formal change to the details of the award, and generally involves the publication of a new award notice/release. The rationale and a description of the changes made can be provided here.	
	awards/amendments/date	Amendment date: The date of this amendment.
	awards/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	awards/amendments/rationale	Rationale: An explanation for the amendment.
When unsolicited bids are received by the procuring entity		
Unsolicited Bids	unsolicitedBids/publisher	Publisher of the unsolicited bid details (entity name)
	unsolicitedBids/reasonsForDenial	Reasons for not accepting the unsolicited bid
	unsolicitedBids/datePublished	Date the unsolicited bid details were published

Bids: The bid extension allows bid statistics, and detailed bid information to be represented in the bid section. Awards can be related to a specific bid.

Bid statistics	Statistics: Summary statistics on the number and nature of bids received. Where information is provided on individual bids, these statistics should match those that can be calculated from the bid details array.	
	bids/statistics/measure	Measure: An item from the bidStatistics codelist for the statistic reported in value. This is an open codelist, and other statistics may also be included.
	bids/statistics/id	ID: An internal identifier for this statistical item.
	bids/statistics/value	Value: The value for the measure in question. Total counts should be provided as an integer. Percentages should be presented as a proportion of 1 (e.g. 10% = 0.1)
	bids/statistics/date	Date: The date when this statistic was last updated. This is often the closing date of the tender process. This field can be left blank unless either (a) the same statistic is provided from multiple points in time, or (b) there is a specific local requirement for the date when statistics were calculated to be provided.
	bids/statistics/relatedLot	Related Lot: Where lots are in use, if this statistic relates to bids on a particular lot, provide the lot identifier here. If left blank, the statistic will be interpreted as applying to the whole tender.
	bids/statistics/notes	Notes: Any notes required to understand or interpret the given statistic.
Bid details	Bid details: An array of bids, providing information on the bidders, and where applicable, bid status, bid values and related documents. The extent to which this information can be disclosed varies from jurisdiction to jurisdiction.	
	bids/details/id	ID: A local identifier for this bid
	bids/details/status	Status: The status of the bid, drawn from the bidStatus codelist
Bid documents	Documents: All documents and attachments related to the bid and its evaluation.	
	bids/details/documents/id	ID: A local, unique identifier for this document. This field is used to keep track of multiple revisions of a document through the compilation from release to record mechanism.
	bids/details/documents/documentType	Document type: A classification of the document described, using the open documentType codelist.
	bids/details/documents/title	Title: The document title.
	bids/details/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	bids/details/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
	bids/details/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	bids/details/documents/dateModified	Date modified: Date that the document was last modified
	bids/details/documents/format	Format: The format of the document, using the open IANA Media Types codelist (see the values in the 'Template' column), or using the 'offline/print' code if the described document is published offline. For example, web pages have a format of 'text/HTML'.
	bids/details/documents/language	Language: The language of the linked document using either two-letter ISO639-1, or extended BCP47 language tags. The use of lowercase two-letter codes from ISO639-1 is recommended unless there is a clear user need for distinguishing the language subtype.
Bid value	Value: The total value of the bid.	

	bids/details/value/amount	Amount: Amount as a number.
	bids/details/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Tenderer	Tenderer: The party, or parties, responsible for this bid. This should provide a name and identifier, cross-referenced to an entry in the parties array at the top level of the release.	
	bids/details/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	bids/details/tenderers/id	Organization ID: The id of the party being referenced. This must match the id of an entry in the parties section.
	bids/details/date	Date: The date when this bid was received.
	bid/details/totalPointsAwarded	Total points awarded once both price and BBEE points are calculated
	bid/details/bbbeePointsClaimed	BBEE points claimed by the bidder
At the contract stage, the following information may be provided (in addition to information from the planning, tender and award stages, and general information)		
Contract information	contracts/id	Contract ID: The identifier for this contract. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	contracts/description	Contract description: Contract description
Period	Period: The start and end date for the contract. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	contracts/period/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	contracts/period/endDate	End date: The end date for the period. When known, a precise end date must be provided.
Value	Value: The total value of this contract. A negative value indicates that the contract will involve payments from the supplier to the buyer (commonly used in concession contracts). Financial values should be published with a currency attached.	
	contracts/value/amount	Amount: Amount as a number.
	contracts/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Items	Items contracted: The goods, services, and any intangible outcomes in this contract. Note: If the items are the same as the award do not repeat.	
	contracts/items/description	Description: A description of the goods, services to be provided.
	contracts/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	contracts/items/unit/name	Name: Name of the unit.
	contracts/items/unit/id	ID: The identifier from the codelist referenced in the scheme property. Check the codelist for details of how to find and use identifiers from the scheme in use.
	contracts/items/unit/scheme	Scheme: The list from which identifiers for units of measure are taken, using the open unitClassificationScheme codelist. 'UNCEFACT' is recommended.
	Classification: The primary classification for the item. A classification consists of at least two parts: an identifier for the list (scheme) from which the classification is taken, and an identifier for the category from that list being applied. It is useful to also publish a text label and/or URI that users can draw on to interpret the classification.	

	contracts/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	contracts/items/classification/id	ID: The classification code taken from the scheme.
	contracts/items/classification/description	Description: A textual description or title for the classification code.
	contracts/items/unit/value/amount	Amount: Amount as a number.
	contracts/items/unit/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Amendment	Amendments: A contract amendment is a formal change to, or extension of, a contract, and generally involves the publication of a new contract notice/release, or some other documents detailing the change. The rationale and a description of the changes made can be provided here.	
	contracts/amendments/id	ID: An identifier for this amendment: often the amendment number
	contracts/amendments/date	Amendment date: The date of this amendment.
	contracts/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	contracts/amendments/rationale	Rationale: An explanation for the amendment.
	contracts/amendments/value/originalContract	The original contract value
	contracts/amendments/value/contractExtension	The amended contract value
	contracts/amendments/value/previousExtension	Whether or not the contract has been amended prior to this amendment
	contracts/amendments/recommendedByAOorAA	Unsure what AO or AA is
	contracts/amendments/supported	Supported or not supported
	contracts/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	contracts/supplier/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.

6.5. Missing Indicators

The following 64 indicators would be possible if all OCDS recommended fields were published.

Indicator	Fields Required	Comment_NorthWest
Collusion		
Lowest bid prices have a difference of less than 2.5%	tender/id bid/statistics/value	List of bidders available in PDF however bid price not published
Variation X% greater than mean for bid prices on similar items	tender/items	No bid price information is published.
When X supplier wins, same set of tenderers loses (at least twice)	awards/suppliers; tender/tenderers; tender/procuringEntity	Tenderers (bidders) are published in PDF. The tender number can be used to link bidders and suppliers, however, both tenderer PDFs and award notices are not published consistently so there is insufficient information.
Difference between bid prices is an exact percentage (whole number)	bid/statistics/value	No information on bid values published
Losing bid prices are unrealistic	bid/statistics/value	No information on bid values published
Collusion, Fraud, Value for Money		
The percent gap between 2 bids by the same bidder for similar items is: Greater than 20% (soft threshold); Greater than 30% (rigid threshold).	awards/value/amount; bid/statistics/value awards/items/unit/value/amount	No bid price information is published.
Persistently high or increasing bid prices compared to cost estimates, price lists or previous prices for similar jobs or industry averages	- tender/value/amount - tender/items/value/amount - tender/procurementEntity - bid/statistics/value	No bid price information is published.
Efficiency of Procurement Process		
Days from bid plan approval to tender period start date	- tender/id - planning/bidPlan/approval (extension) - tender/tenderPeriod/startDate	Bid plan approval not published
Days from tender start to award date	- tender/id - awards/id - tender/tenderPeriod/startDate - awards/date	Only the month of award is published - this indicator requires days. Furthermore, the data is not sufficiently complete to be able to track contracting procedures from tender advert to award.
Days from contract signing to implementation end	- contracts/id - contracts/period/startDate - contracts/period/endDate	No contracts published
% of procurements whose implementation times comply with legal requirements	- Results of above indicators - Thresholds for legally required start/end periods for each phase	No implementation details published
Frequency of use of amendments in tender phase	- tender/id - tender/amendments/id - tender/amendments/description	Only 2 amendments published on PDFs
% of procurements in which payment is made at least 60 days after last milestone complete	- contract/id - contract/implementation/milestones - contract/period/endDate - contract/status	No implementation milestone / payment details published.

Days from tender close to award date	tender/id tender/tenderPeriod/endDate awards/date	Only the month of award is published - this indicator requires days. Furthermore, the data is not sufficiently complete to be able to track contracting procedures from tender advert to award.
Days from award date to start of implementation	awards/id awards/date awards/contractPeriod/startDate	No contract start date published, award date is month only, and the award data is not sufficiently complete.
Proportion of canceled tenders to awarded tenders and total tender adverts	tender/id tender/status	It is possible to link tender adverts to awards and cancellations using the tender number but awards and cancellations are not published for all adverts so this indicator will be inaccurate.
Percent of contracts which are canceled	contracts/id contracts/status	Contract cancellations not published
Fraud		
Common contact details between procuring entities and suppliers	tender/procuringEntity/contactPoint/telephone; awards/suppliers/contactPoint; tender/procuringEntity/address; awards/suppliers/address	Supplier details are not published with the award notice (only the supplier name is published)
Winning supplier's address is a PO Box (consider: Address of payment is PO Box)	parties/address (supplier) or parties/address/streetAddress	Winning supplier's address is not published on North West Province portal
Supplier is less than 12 months old and has never submitted a bid for another contract	awards/suppliers; tender/tenderers	Unable to establish supplier's age from published information
Common contact details between suppliers	awards/suppliers/address; awards/suppliers/faxnumber; awards/suppliers/streetAddress; awards/suppliers/contactPoint	Winning supplier's contact details are not published on North West Province portal
Only winning bidder was eligible for a tender that had multiple bidders	tender/tenderers; awards/suppliers; awards/status	No information on eligibility/qualification of tenderers is published.
Market Opportunity / Competitiveness		
Percent of tenders with at least three participants deemed qualified	tender/id tender/numberOfTenderers OR tender/tenderers/identifier/id bids/validBids (Bid Extension)	No information on eligibility/qualification of tenderers is published.
Share of contracts awarded to small and medium-size enterprises (SMEs)/ Total amount of contracts awarded to SMEs	- contract/id - contract/value - SME data field (extension)	Insufficient information published.
Share of contracts awarded to international companies vs. local firms	- contract/id - parties/address/countryName (suppliers)	Insufficient information published.
Mean number of bidders by item type	tender/id tender/tenderers/identifier/id tender/items/id	No details available on bidders nor per item at bid or award release.
Mean number of unique suppliers per procuring entity	awards/id tender/id tender/procuringEntity/identifier/id awards/suppliers/identifier/id	Procuring entity is always the North West Department of Health. The mean number of suppliers can be calculated for the NW Department of Health but there would be nothing to compare the mean to - perhaps a mean can be extracted from eTenders and this could be used. Awarded tenders are inconsistently published and so they have been recorded as missing.

Percent of new tenderers to all tenderers	awards/id awards/suppliers/identifier/id tender/tenderPeriod/endDate	Tender responses are published in PDF however only 12 contracting procedures from Oct 2018 - July 2019 are published. There are no tenderer id's published so this would need to be done using tenderer names, which provides room for inaccuracy, as it relies on how the tenderer names are captured by varying individuals.
Number and value of awards to new (first time) suppliers and conversely to repeat suppliers	awards/id awards/suppliers/identifier/id awards/date awards/value/amount	Suppliers are published together with the month of the award so it will be possible to determine new suppliers and repeat suppliers over a period of time. The age of the supplier is not published. However, the supplier data is scarce - only 9 unique awards are published from March 2017 - August 2017 and therefore the award fields has been recorded as missing
Mean number of tenderers per tender	tender/id tender/numberOfTenderers OR tender/tenderers/id	Tender responses are published in PDF however only 12 contracting procedures from Oct 2018 - July 2019 are published so the PDFs have been recorded as missing
Process Rigging		
Winning bid is lower than other bids by 25% minimum (when there are two or more bids)	awards/suppliers; tender/tenderers; bid/statistics/value	No information on bidders price published on portal
No. of procuring entities that issue two awards to same company for same/similar item below procurement threshold	- tender/procuringEntity - awards/suppliers/id - tender/items/id - awards/value - competitive threshold (extension)	Contract values are not published on NorthWest but award values can be used. Suppliers that are awarded 2 bids of a similar value can be identified through the data catalogue. The procuring entity is the same for all tenders (NorthWest). The threshold for competitive bidding is R500,000 (below requires 3 quotes, above requires formal process), therefore this indicator would look for 2 awards just below R500,000. However, the supplier data is scarce - only 9 unique awards are published from March 2017 - August 2017 and therefore the fields have been recorded as missing.
Procuring entities that issue two awards to same company where the second award is x% larger than the first	tender/procuringEntity; awards/value/amount; awards/suppliers	Contract values are not published on NorthWest but award values can be used. The procuring entity is the same for all tenders (NorthWest). However, the supplier data is scarce - only 9 unique awards are published from March 2017 - August 2017 and therefore the fields have been recorded as missing.
Supplier receives multiple single-source/non-competitive contracts from a single procuring entity during a calendar year	awards/suppliers; contracts/id; tender/procurementMethod = limited or direct; tender/procuringEntity	It is assumed that all awards are competitive but the procurement method is not stated.
Procurement plan recommends against sole source; sole source ultimately used	procurementMethodDetails	procurement methods are not published.
Supplier receives multiple sole source awards approved by same official	awards/suppliers; tender/procurementMethodDetails	Procurement method not stated, it can be assumed that all tenders are competitive.
Key tender documents are not available through online platform during tender period	tender/documents; tender/tenderPeriod/startDate; tender/tenderPeriod/endDate	No documents are published with the tenders on the portal. The tender advert notes that documents are available via eTenders or from the physical office.
Change orders (amendments) increase price beyond initial contract price (or some % above initial contract price) when contract is sole source and within 5% of bid threshold	contracts/value/amount; tender/procuringEntity; awards/suppliers; contracts/implementation/transactions/amount/amount; tender/procurementMethodDetail	No contract details have been published on portal

	s	
Difference between award and contract amount is greater than X%	awards/value/amount; contracts/value/amount	Contract values are not published on NorthWest DoH portal. Sidenote: Contracts are only published on SA DOH.
Complaint = changes to bids, winning bidder was involved in contracting process, winning bidder was involved in contracting process		Complaints not published
Percent of tenders and value awarded by means of competitive procedures and sole source procedures	tender/procuringEntity; tender/procurementMethod; award/value/amount	It is assumed that all awards are competitive but the procurement method is not stated.
Process Rigging & Market Opportunity		
Ratio and mean of bids which are disqualified	tender/tenderers	There is no field published for 'disqualified bidders'
Process Rigging & Collusion		
Success rate of tenderers (bidders)	bid/bidders; awards/suppliers; tender/procuringEntity	Tender responses are published in PDF however only 12 contracting procedures from Oct 2018 - July 2019 are published so the indicator wouldn't be possible for all tender adverts, just those 12 published.
Lowest bidder does not meet award criteria	tender/tenderers	No adjudication information is published.
Public Integrity		
% of tenders that use the planned procurement method	- tender/id - planning/procurementMethod (extension) - tender/procurementMethod	It is assumed that all awards are competitive but the procurement method is not stated
Percent of tenders with linked procurement plans	tender/documents/documentType (=procurementPlan)	No procurement planning details have been published on the portal
Publication of contracts (when an award has been made)	awards/id awards/date contracts/id contracts/documents/documentType (=contractNotice)	Contracts and date of awards are not published on NorthWest.
Public Integrity & Process Rigging		
Frequency of use of amendments in contracting phase (disaggregated by reason, supplier and procuring entity)	tender/id tender/procuringEntity contracts/id -contracts/amendments/rationale contracts/procuringEntity/name	No contract details have been published on portal and so there is no information on contract amendments.
Reporting & Descriptive Analytics		
Number and value of awards by procurement category	- tender/id - tender/procurementCategory - tender/value	Awards release has been used as a proxy for tenders release. Procurement categories are unique to NorthWest (not standard OCDS). North West also publishes the sector which can be included for this indicator, however, the sector and category data doesn't seem to be consistent or align. Furthermore, the award data is scarce - only 9 unique awards are published from March 2017 - August 2017 and therefore the award fields have been recorded as missing.

List of largest procurements	- awards/id - awards/value - awards/contractPeriod	Contract information is not published but awards information can be used. However, the award data is scarce - only 9 unique awards are published from March 2017 - August 2017 and therefore the award fields have been recorded as missing.
Transparency & Disclosure of Procurement Process		
Percent of contracts which publish contract implementation details (physical and financial)	contracts/implementation/transactions/id contracts/implementation/transactions/amount contracts/implementation/transactions/currency	Contracts are not published on NorthWest portal.
Publication of awards with links to tender adverts	- awards/id - tender/documents/tenderNotice	While technically the fields published can be used to calculate this indicator by linking using the awards and tender id, in reality, tender data is only available from October 2018 (there is no archive from before this date) and awards are only available up to August 2017. So it is impossible to calculate this indicator given the completeness of the data.
No. of complaints received (total, per PE/per time period) & percent of tenders w/ complaints	- tender/id - tender/procuringEntity - Number of complaints (extension)	Complaints aren't published
No. & percent of complaints resolved (total, per PE/per time period/time it takes to resolve)	- tender/id - tender/procuringEntity - complaints ID (extension) - answers ID (extension)	Complaints aren't published
Supplier blacklist published and updated [regularly] - Number of suppliers on blacklist	- tenders/suppliers/id - blacklist ID (extension)	The NorthWest portal does not publish a list of blacklisted suppliers.
Percent of tenders that do not include detailed item codes or item descriptions	- tender/id; - tender/items/id - tender/items/description OR tender/items/classification/id	Tender items are not published on portal.
Awards are published for every bid and within xx number of days	tender/id awards/id tender/endDate	While technically the fields published can be used to calculate this indicator by linking using the awards and tender id, in reality, tender data is only available from October 2018 (there is no archive from before this date) and awards are only available up to August 2017. So it is impossible to calculate this indicator given the completeness of the data.
% of tenders that don't publish basic unsuccessful bidder information	awards/id a) bids/details/tenderers/name b) bids/details/totalPointsAwarded c) bids/details/value/amount	No unsuccessful bidder details or points awarded have been published.
% of tender awards that don't publish basic award information	a) awards/id awards/description b) awards/suppliers/name awards/supplier/bbbbeePoints c) awards/value/amount d) awards/contractPeriod/startDate (end/Date) e) parties/identifier/namesOfDirectors f) awards/awardDate awards/datePublished	The legal requirement to publish this data is for the eTenderPublication Portal only but it is still a useful descriptive indicator for the NorthWest portal. BBBEE points aren't published on the NorthWest portal. It should be noted, however, that the award data is scarce - only 9 unique awards are published from March 2017 - August 2017, therefore the fields have been recorded as missing and the indicator could not be calculated.

The names of bidders in an advertised competitive bid – and where practical- the total price and any preference claimed by the bidders are published within 10 working days after the bid closed and remain on the website for at least 30 days	tender/id bids/details/tenderers/name bids/details/value/amount bid/details/bbbbePointsClaimed bid/details/datePublished	NorthWest DoH only publishes the name of bidders in PDF. No values or other details of bidders are published. These PDFs are limited and outdated and so they have been recorded as missing
Value for Money		
Percent of contracts that exceed budget and mean percent overrun (and vice versa: percent of contracts that are completed on time and to budget).	contracts/status planning/budget/amount/amount awards/value/amount contracts/implementation/transac tions/amount contracts/id contracts/period/endDate contracts/implementation/milesto nes/dueDate contracts/implementation/milesto nes/dateMet	No contract information published
Total percent savings (difference between tender value / budget estimate and contract value)	tender/id tender/value/amount OR planning/budget/amount contracts/id contracts/value/amount	No contract information published
Amount of cancelled funding at the contract stage by cancellation reason	- tender/id - tender/status - tender/value - contracts/id - contract/status - contracts/value - cancellation reason (extension required)	Value not published at the cancellation release. Contract cancellations not published at all.
% difference in final payment amount vs. contract amount	- contracts/value/amount - contracts/implementation/transac tions/	No contract information published

Annexure 7

Annexure 7:

Gauteng Portal

A detailed overview of information published on the Gauteng Portal is provided below, along with potential indicators. All fields and indicators, together with their availability and various categorisations are available in spreadsheet format [here](#).

7.1. Available Fields: HTML

The Gauteng Province publishes some basic information in HTML at the advertised, awards, closed and cancelled tender stages. The table below provides the fields that are available. The text in purple represents commentary on diversion from the OCDS fields and additions to the OCDS fields based on the South African context.

	Field Path	Definition
Tender	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. <i>Note: There is not a tender description and tender title published. Tender description field has been chosen instead of tender title because the title given is quite descriptive in nature. But both could have been used here.</i>
	tender/briefingSession	Is there a compulsory briefing for this tender?
	tender/briefingDate	Date the briefing session is scheduled for
	tender/briefingAddress	Address where the briefing session will take place
	tender/briefingTime	Time the briefing session is scheduled for
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/tenderPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided. <i>Note: For the purposes of this report, the date the tender advert is published on the eTenders portal is considered to be the start date.</i>
	tender/tenderPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	tender/tenderPeriod/endTime	End time: The end date for the period. When known, a precise end date must be provided.
	tender/tenderPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.

	tender/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
For each item in the tender stage you may provide:		
Update release once the tender has closed. Tenders move from the 'advertised tenders' section to the 'closed tenders' section of the portal on the closing date.		
Closed Tenders	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. Note: There is not a tender description and tender title published. Tender description field has been chosed instead of tender title because the title given is quite descriptive in nature. But both could have been used here.
	tender/tenderPeriod/startDate	Date the tender was advertised
	tender/tenderPeriod/endDate	Date the tender was closed
Update release if the tender is cancelled. Tenders move from the 'advertised tenders' section to the 'cancelled tenders' section of the portal.		
Cancelled tenders	tender/id	Tender ID: An identifier for this tender process. This may be the same as the ocid, or may be an internal identifier for this tender. It is assumed that the reference number provided matches the tender advert but further investigation is required.
	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
	tender/description	Tender description: A summary description of the tender. This complements any structured information provided using the items array. Descriptions should be short and easy to read. Avoid using ALL CAPS. Note: There is not a tender description and tender title published. Tender description field has been chosed instead of tender title because the title given is quite descriptive in nature. But both could have been used here.
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
At the award stage, the following information may be provided (in addition to information from the planning and tender stages, and general information)		
Award information	awards/id	Award ID: The identifier for this award. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	awards/description	Description: Award description
	tender/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
Contract period: The period for which the contract has been awarded. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.		
	awards/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	awards/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the

		difference between startDate and maxExtentDate.
Suppliers	Suppliers: The suppliers awarded this award. If different suppliers have been awarded different items or values, these should be split into separate award blocks.	
	awards/suppliers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	awards/suppliers/bbbeePoints	Number of BBEE points claimed by the bidder
	awards/suppliers/totalPointsAwarded	Total points awarded once both price and BBEE points are calculated
	awards/value/amount	Amount: Amount as a number.
	awards/value/currency	Currency: The currency of the amount, from the closed currency codelist. https://drive.google.com/open?id=1UThR89OLMq3uWmy0q4q58SBI3OOWJ6X8
For each document related to the award stage you may provide:		
Awards Documents	Documents: All documents and attachments related to the award, including any notices.	
	awards/documents/title	Title: The document title.
	awards/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
Bids: The bid extension allows bid statistics, and detailed bid information to be represented in the bid section. Awards can be related to a specific bid.		
Bid statistics	Statistics: Summary statistics on the number and nature of bids received. Where information is provided on individual bids, these statistics should match those that can be calculated from the bid details array.	
Bid details	Bid details: An array of bids, providing information on the bidders, and where applicable, bid status, bid values and related documents. The extent to which this information can be disclosed varies from jurisdiction to jurisdiction.	
	bids/details/id	ID: A local identifier for this bid
Bid documents	Documents: All documents and attachments related to the bid and its evaluation.	
Bid value	Value: The total value of the bid.	
	bids/details/value/amount	Amount: Amount as a number.
	bids/details/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Tenderer	Tenderer: The party, or parties, responsible for this bid. This should provide a name and identifier, cross-referenced to an entry in the parties array at the top level of the release.	
	bids/details/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	bids/details/tenderers/id	Organization ID: The id of the party being referenced. This must match the id of an entry in the parties section.

7.2. Indicator List: HTML

Given the above available fields, 12 indicators are possible. Indicators are categorised into 3 effort levels, where low indicates that the indicator can be calculated using the data catalogue as it currently stands, medium requires some data wrangling and high requires a larger, longitudinal sample for the indicator to be calculated. While these are included below, it is not advised that indicators requiring award date are published due to inconsistencies in the data with regard to this field. If one excludes the indicators that include award date, there are in fact only 3 indicators that can be calculated using the data catalogue as it currently stands. These are:

- Tendering period less or more than 21 days
- Percentage of tender adverts that don't publish basic tender information
- Percentage of tender awards that publish basic awards information

Efficiency of Procurement Process

Days from tender start to award date

Effort	Low
Description	Number of days between the date the tender advert is published and the date of award.
Considerations & challenges	Only awards published in the scraped award report PDFs from 2009 to 2010 have award date published. Every other award from 2011 onwards has advert date published which is assumed to be different to award date. Therefore this indicator can only be calculated for only the few awarded tenders that have an awards date. These dates are often after the contract start date which proves the data capturing is very inconsistent and inaccurate and so this indicator must be highly scrutinised if calculated.
Formula	$\text{number of days} = \text{awards date} - \text{tender start date}$
Interpretation	Longer time delays between phases of the contracting process can signal inefficiency in the contracting process
Data needed	Tender number: tender/id award/id Tender period start date: tender/tenderPeriod/startDate Award date: awards/date

Days from tender close to award date

Effort	Low
Description	Number of days between the date the tender submission is due and the date of award.
Considerations & challenges	Only awards published in the scraped award report PDFs from 2009 to 2010 have award date published. Every other award from 2011 onwards has advert date published which is assumed to be different to award date. Therefore this indicator can only be calculated for only the few awarded tenders that have an awards date. These dates are often after the contract start date which proves the data capturing is very inconsistent and inaccurate and so this indicator must be highly scrutinised if calculated.
Formula	$\text{number of days} = \text{awards date} - \text{tender close date}$
Interpretation	Longer time delays between phases of the contracting process can signal inefficiency in the contracting process
Data needed	<p>Tender number: tender/id award/id</p> <p>Tender period close date: tender/tenderPeriod/endDate</p> <p>Award date: awards/date</p>

Days from award date to start of implementation

Effort	Low
Description	Number of days between the date of the award and the date implementation starts.
Considerations & challenges	Implementation details are not published, however contract period start date has been used instead. Only awards published in the scraped award report PDFs from 2009 to 2010 have award date published. Every other award from 2011 onwards has advert date published which is assumed to be different to award date. Therefore this indicator can only be calculated for only the few awarded tenders that have an awards date. These dates are often after the contract start date which proves the data capturing is very inconsistent and inaccurate and so this indicator must be highly scrutinised if calculated.
Formula	$\text{number of days} = \text{contract start date} - \text{awards date}$
Interpretation	Longer time delays between phases of the contracting process can signal inefficiency in the contracting process
Data needed	<p>Tender number: tender/id award/id</p> <p>Implementation start date: awards/contractPeriod/startDate</p> <p>Award date: awards/date</p>

Proportion of canceled tenders to awarded tenders and total tender adverts

Effort	Medium
Description	Calculates the proportion of cancelled or unsuccessful tenders compared to total tenders advertised and awards made. .
Considerations & challenges	<p>There is no date published with cancelled tenders therefore this indicator would need to be calculated at a point in time and would not represent a time period (e.g. 2020) but rather all records published up to a point in time.</p> <p>Ideally, this indicator would also be calculated for the value of cancelled tenders but the value is not published.</p>
Formula	$\frac{\sum \text{cancelled or unsuccessful tenders}}{\sum \text{Total tenders}} * 100$ $\frac{\sum \text{cancelled or unsuccessful tenders}}{\sum \text{Total awards}} * 100$
Interpretation	Having a high value in this indicator could signal inefficiencies in the procurement process.
Data needed	<p>Tender number as per the cancellation notice: tender/id</p> <p>Tender number as per the tender release (advert): tender/id</p> <p>Tender number as per the awards release awards/id</p>

Market Opportunity / Competitiveness

Number and value of awards to new (first time) suppliers and conversely to repeat suppliers

Effort	Medium
Description	This calculates the percentage of awards (and value) awarded to new (first time) suppliers. Conversely, this calculates the percentage of awards granted to repeat suppliers. An extension of this indicator is to calculate the share of contracts awarded to top 10 suppliers (per procuring entity; either as amount or percent of contracts awarded).
Considerations & challenges	For Gauteng Portal, award dates are inaccurate, so establishing a time period will not be possible. Furthermore, there are no supplier id's published so this would need to be done using supplier names, which provides room for inaccuracy, as it relies on how the supplier names are captured by varying individuals.
Formula	<p>For all awards</p> $\text{percent of first time suppliers} = \frac{\sum \text{Number of first time suppliers}}{\sum \text{Number of suppliers}} * 100$
Interpretation	A higher percent of new (first-time) suppliers may indicate greater system openness and potential for competition. A higher percent of total sum awarded to repeat suppliers may indicate lesser system openness and potential for competition. This indicator is more powerful when one also considers the age of bidding companies, as new young bidders could, in certain contexts, be a risk to integrity.
Data needed	Supplier

	awards/suppliers/name
	Value awards/value/amount

Process Rigging

Procuring entities that issue two awards to same company below procurement threshold

Effort	Medium
Description	No. of procuring entities that issue two awards to the same company for the same/similar item below procurement threshold.
Considerations & challenges	Contract values are not published but award values can be used. Suppliers that are awarded 2 bids of a similar value can be identified through the data catalogue. The procuring entity is the same for all tenders (Gauteng DoH). The threshold for competitive bidding is R500,000 (below requires 3 quotes, above requires formal process), therefore this indicator would look for 2 awards just below R500,000. The item would need to be established through interpretation of the award description or through the PDF documents attached to the tender advert.
Formula	For each supplier: <i>if value of award a and award b < threshold, return true</i>
Interpretation	Split purchases to prevent suspicion generated from large awards.
Data needed	Award identifier awards/suppliers/id Award value awards/value/amount

Procuring entities that issue two awards to same company where the second award is x% larger than the first

Effort	Medium
Description	No. of procuring entities that issue two awards to the same company for the same/similar item where the second award is X% larger than the first.
Considerations & challenges	Contract values are not published but award values can be used. Suppliers that are awarded 2 bids of a similar value can be identified through the data catalogue. The procuring entity is the same for all tenders (Gauteng DoH). It should be noted that the awards date information seems inaccurate so the results of this indicator would need to be assessed carefully on a case by case basis.
Formula	For each supplier: <i>if $\frac{\text{value of award b} - \text{value of award a}}{\text{value of award b}} * 100 > x\%$, return true</i>
Interpretation	Small initial purchase from supplier followed by much larger purchases (first purchase is to test whether it will be accepted).
Data needed	Award identifier awards/suppliers/name Award value awards/value/amount

Tendering period less or more than 21 days

Effort	Low
Description	Number of days between the tender start date and its closing date.
Considerations & challenges	National Treasury Regulation (GG 27388 of 15 March 2005) 16A 6.3. Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.
Formula	$duration = Tender\ period\ end\ date - Tender\ period\ start\ date$ $mean(duration)$ $median(duration)$
Interpretation	Allowing an unreasonably short time to respond to requests for bids can reduce competition. A tender period of more than 21 days may signal inefficiencies.
Data needed	Tender start date: tender/tenderPeriod/startDate Tender end date: tender/tenderPeriod/endDate

Reporting and Descriptive Analytics

List of largest procurements

Effort	Low
Description	A list of procurements by value over a period of time
Considerations & challenges	Date of award and contract start date not published with award release.
Formula	<i>sort award value</i>
Interpretation	Descriptive only.
Data needed	Awards identifier awards/id Awarded contract value awards/value/amount Time period awards/contractPeriod/endDate

Transparency & Disclosure of Procurement Process

% of tender adverts that don't publish basic tender information

Effort	Low
Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 3) dictates that certain basic tender information must be published on eTenders for national and provincial department procurement. Bid adverts over R 500 000 must include: (a) Bid description; (b) Bid number; (c) Name of the department; (d) The place where the bid is required; (e) The closing date and time of the bid; (f) The department's contact details (postal and physical address, telephone number, etc.); (g) The place where bids can be collected; (h) The place where bids should be delivered; and (i) The bid document (SBDs, Terms of Reference, GCC and other relevant documents)</p> <p>The legal requirement to publish this data is for the eTender Publication Portal only but it is still a useful descriptive indicator for the NorthWest portal. Especially if there are tenders published on the NorthWest Portal that aren't available on eTenders (tbd during the comparative analysis phase). Tender document meta-data is not published but it is indicated where the documents can be found (generally eTenders or at the offices).</p>
Considerations & challenges	The bid documents published cannot be ascertained via the data catalogue, however, all other requirements can be. Can be calculated per year for all categories and procuring entities, or segmented.
Formula	<p>For each tender information category, for all tender adverts:</p> $\text{percent of tenders} = \frac{\sum \text{count}(\text{false})}{\text{Total number of tenders advertised}} * 100$ <p style="text-align: center;"><i>count where tender information category = false</i></p>
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation, especially where percentages are particularly high for a specific procuring entity.
Data needed	<p>Tender description tender/description</p> <p>Tender Number tender/id</p> <p>Procuring entity name tender/procuringEntity/name</p> <p>Place where good or services will be delivered/implemented tender/items/deliveryLocation/description</p> <p>Closing date and time of tender advert tender/tenderPeriod/endDate & endTime</p> <p>Contact details of tender contact point parties/contactpoint/name & email & telephone & faxNumber</p> <p>Where the tender documents are available from tender/applicationAquisitionDetails</p> <p>Where the tender response/submission should be submitted tender/submissionMethodDetails</p>

% of tender awards that don't publish basic award information

Effort	Low
Description	<p>National Treasury Instruction 1 of 2015/2016 (instruction 4) dictates that certain basic award information must be published on eTenders for national and provincial department procurement within 7 days of the bid being awarded. This includes:</p> <p>(a) Contract description and bid number; (b) Names of the successful bidder(s) and preference points claimed; (c) Contract price(s), if possible; (d) Contract period; (e) Names of Directors; and (f) Date of completion/award</p>
Considerations & challenges	The date of award is not published on eTenders. Note: Successful bids includes bids concluded through a limited bidding process (i.e includes deviations and unsolicited bids) (this cannot be calculated using the data catalogue which only accounts for open tender processes).
Formula	<p>For each award information category, for all award notices:</p> $\text{count where awards information category} = \text{false}$ $\text{percent of awards} = \frac{\sum \text{count}(\text{false})}{\text{Total number of award notices}} * 100$
Interpretation	The percentage should always be 0%. All percentages over 0% warrant investigation.
Data needed	<p>Awards description awards/description</p> <p>Award Number awards/id</p> <p>Supplier name awards/suppliers/name</p> <p>Supplier points claimed awards/suppliers/totalPointsAwarded</p> <p>Contract price awards/value/amount</p> <p>Contract period end date awards/contractPeriod/endDate</p> <p>Names of directors parties/identifier/namesofDirectors</p>

Awards are published for every bid and within XX number of days

Effort	Medium
Description	<p>For every tender advert, there is a corresponding award notice (excluding cancelled tenders). This requirement is per National Treasury Regulation (GC 27388 of 15 March 2005) 16A 6.3 (d). Regulation published in terms of PFMA – therefore applies to National and Provincial Departments.</p> <p>A higher rate of tenders without timely awards information may signal lack of integrity. No awards information can signal that the tender process was not fully completed. If it was completed, the interaction between the bidders and buyer is not transparent, and relevant interested parties cannot monitor the process.</p>
Considerations & challenges	Can ascertain whether awards are published for every bid through the tender id however the date is inaccurate so the number of days cannot be reliably calculated.
Formula	<p>For all tenders and awards:</p> $\text{if } \text{tender number} \neq [\text{award number}], \text{return } x$
Interpretation	Where tenders do not have corresponding awards after a period of time, this is a red flag.
Data needed	<p>Tender Number tender/id</p> <p>Tender end date tender/endDate</p> <p>Award Number award/id</p>

7.3. Available Fields: PDF

Several fields are published within PDFs on the Gauteng Portal across all releases. These include:

	Field Path	Definition
At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
	tender/preferencePointsSystem	80/20 or 90/10
	tender/requestedSupplier'sPerformanceRecords	Were the suppliers performance records requested in the tender documents? e.g. reference letters
	tender/applicationAquisitionDetails	Address where a person can get the application
	tender/submissionMethod	Submission method: The methods by which bids are submitted, using the open submissionMethod codelist.
	tender/submissionMethodDetails	Submission method details: Any detailed or further information on the submission method. This can include the address, e-mail address or online service to which bids are submitted, and any special requirements to be followed for submissions.
	tender/eligibilityCriteria	Eligibility criteria: A description of any eligibility criteria for potential suppliers.
	tender/pre-qualificationCriteria	Was there any pre-qualification criteria (i.e before bidding)
	tender/requestedSamples	Were samples of goods requested as part of the tender process?
	tender/legalInstrument	What is the legal instrument listed? i.e. Preferential Procurement Policy Framework Act 2000
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/tenderPeriod/offerValidDurationDays	Number of days for which the bidder's quote must be valid
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured		
Tender Parties Procuring Entity	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/countryName	Country name: The country name. For example, United States.
	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
When you have received all proposals, a tenderUpdate release may include a tenderers section with cross references to the parties section.		
Tenderers	tender/numberOfTenderers	Number of tenderers: The number of parties who submit a bid.

	tender/tenderers/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
Use the codelist mapping template to map the documents in your system to the documents recommended for publication as part of an open contracting implementation.		
For each document related to the tender stage you may provide:		
Tender Document Meta-data	Documents: All documents and attachments related to the tender, including any notices. See the documentType codelist for details of potential documents to include. Common documents include official legal notices of tender, technical specifications, evaluation criteria, and, as a tender process progresses, clarifications and replies to queries.	
	tender/documents/title	Title: The document title.
For each item in the tender stage you may provide:		
Tender Items	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.	
	tender/items/description	Description: A description of the goods, services to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	tender/items/unit/name	Name: Name of the unit. Reference this list .
South African legislation requires standard general conditions of contract and special conditions of contract to be published in the tender documents. These fields are required within these documents.		
General and special conditions of contract	Delay penalties outlined in General Conditions of Contract	Penalties issued to suppliers for delay in delivery of goods and services
	Time of delivery	Time of delivery specified in the contract
	Patent rights	Which party retains the patent of goods and services rendered
	Term of warranty	What is the term of warranty for goods supplied
	bid/details/totalPointsAwarded	Total points awarded once both price and BBBEE points are calculated
	bid/details/bbbeePointsClaimed	BBBEE points claimed by the bidder

7.4 Indicator List: PDF

The following 2 additional indicators can be calculated based on information contained within the available PDF documents.

Indicator	Fields Required	Comment_Gauteng Portal
Efficiency of Procurement Process		
% of tenders using electronic bidding	- tender/id - tender/submission Method	Submission method is available within the PDF attachments to the tender listing.
Process Rigging		
Key tender documents are not available through online platform during tender period	-tender/documents; - tender/tenderPeriod/startDate; - tender/tenderPeriod/endDate	Tender documents are available via a variety of methods, including from a particular office, or website, or attached to the advert listing on Gauteng Portal. It is possible to manually follow these links for each listing to confirm if they are there and which documents are available, but not possible via scraping.

7.5. Missing fields

Substantial information recommended in the OCDS is not published via the Gauteng portal. The following fields are not published i.e. this information is not public. In addition to the below, there is no information on the implementation phase published. Priority missing fields are highlighted for inclusion within the recommendations for this portal.

	Field Path	Definition
At the planning stage, the following information may be provided, in addition to general information		
Planning	planning/rationale	Rationale: The rationale for the procurement provided in free text. More detail can be provided in an attached document.
Budget	Budget: Details of the budget that funds this contracting process. This section contains information about the budget line, and associated projects, through which this contracting process is funded. It draws upon the data model of the Fiscal Data Package, and should be used to cross-reference to more detailed information held using a Budget Data Package, or, where no linked Budget Data Package is available, to provide enough information to allow a user to manually or automatically cross-reference with another published source of budget and project information.	
	planning/budget/description	Budget Source: 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/project	Project title: The name of the project through which this contracting process is funded (if applicable). Some organizations maintain a registry of projects, and the data should use the name by which the project is known in that registry. No translation option is offered for this string, as translated values can be provided in third-party data, linked from the data source above.
	planning/budget/projectID	Project identifier: An external identifier for the project that this contracting process forms part of, or is funded via (if applicable). Some organizations maintain a registry of projects, and the data should use the identifier from the relevant registry of projects.
Amount	Amount: The value reserved in the budget for this contracting process. A negative value indicates anticipated income to the budget as a result of this contracting process, rather than expenditure. Where the budget is drawn from multiple sources, the budget breakdown extension can be used. Financial values should be published with a currency attached.	
	planning/budget/amount/amount	Amount: Amount as a number.
	planning/budget/amount/currency	Currency: The currency of the amount, from the closed currency codelist.
Parties	Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured	
	planning/entity/name	Common name: A common name for this organization or other participant in the contracting process. The identifier object provides a space for the formal legal name, and so this may either repeat that value, or may provide the common name by which this organization or entity is known. This field may also include details of the department or sub-unit involved in this contracting process.
	planning/contactName	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.

	planning/contactTelephone	Telephone: The telephone number of the contact point/person. This should include the international dialing code.
	planning/contactEmail	Email: The e-mail address of the contact point/person.
Milestones	Milestones: The following milestone information is published at the planning stage.	
	planning/tender/period/startDate	The date the entity plans to publish the tender
	planning/tender/period/endDate	The date the entity plans to close the tender
	planning/awardDate	The date the entity plans to make the award
At the tender stage, the following information may be provided (in addition to information from the planning stage, and general information)		
	tender/title	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 Process	tender/procurementMethod	Procurement method: The procurement method, from the closed method codelist.
	tender/procurementMethodDetails	Procurement method details: Additional detail on the procurement method used. This field can be used to provide the local name of the particular procurement method used.
	tender/procurementMethodRationale	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/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. <i>Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.</i>
	tender/proposedPublicAndPrivatePartnership	Was it proposed in the tender documents that this project could be a public private partnership?
	tender/proposedPublicAndPrivatePartnershipDetails	Details on PPP arrangement proposed
	tender/prebiddingTesting	Pre-bidding testing to be carried out
Tender Period	Tender period: The period when the tender is open for submissions. The end date is the closing date for tender submissions. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/tenderPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	Evaluation and award period: The period for decision making regarding the contract award. The end date should be the date on which an award decision is due to be finalized. The start date may be used to indicate the start of an evaluation period. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	tender/awardPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	tender/awardPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.

tender/awardPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
tender/awardPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
Contract period: The period over which the contract is estimated or required to be active. If the tender does not specify explicit dates, the duration field may be used. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
tender/contractPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
tender/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
tender/contractPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
tender/contractPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
Enquiry period: The period during which potential bidders may submit questions and requests for clarification to the entity managing procurement. Details of how to submit enquiries should be provided in attached notices, or in submissionMethodDetails. Structured dates for when responses to questions will be made can be provided using tender milestones. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
tender/enquiryPeriod/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
tender/enquiryPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
tender/enquiryPeriod/maxExtentDate	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
tender/enquiryPeriod/durationInDays	Duration (days): The maximum duration of this period in days. A user interface can collect or display this data in months or years as appropriate, and then convert it into days when storing this field. This field can be used when exact dates are not known. If a startDate and endDate are set, this field, if used, should be equal to the difference between startDate and endDate. Otherwise, if a startDate and maxExtentDate are set, this field, if used, should be equal to the difference between startDate and maxExtentDate.
Details of the entity managing the procurement should be provided in the parties section. This may be different from the buyer who is paying / using the items being procured	

Tender Parties Procuring Entity	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/url	URL: A web address for the contact point/person.
For each document related to the tender stage you may provide:		
Tender Document Meta-data	Documents: All documents and attachments related to the tender, including any notices. See the documentType codelist for details of potential documents to include. Common documents include official legal notices of tender, technical specifications, evaluation criteria, and, as a tender process progresses, clarifications and replies to queries.	
	tender/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	tender/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	tender/documents/dateModified	Date modified: Date that the document was last modified
	tender/documents/format	Format: The format of the document, using the open IANA Media Types codelist (see the values in the 'Template' column), or using the 'offline/print' code if the described document is published offline. For example, web pages have a format of 'text/HTML'. https://www.iana.org/assignments/media-types/media-types.xhtml
	tender/documents/language	Language: The language of the linked document using either two-letter ISO639-1, or extended BCP47 language tags. The use of lowercase two-letter codes from ISO639-1 is recommended unless there is a clear user need for distinguishing the language subtype.
	tender/documents/publisherName	List of all portals document is published on
For each item in the tender stage you may provide:		
Tender Items	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.	
	tender/immovableProperty	Is there immovable property in this contract - this affects things and should be considered in the indicator analysis consult docs on SA process
	tender/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	Classification: The primary classification for the item. A classification consists of at least two parts: an identifier for the list (scheme) from which the classification is taken, and an identifier for the category from that list being applied. It is useful to also publish a text label and/or URI that users can draw on to interpret the classification.	
	tender/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist. https://www.sars.gov.za/TaxTypes/PAYE/ETI/Pages/SIC-Codes.aspx
	tender/items/classification/id	ID: The classification code taken from the scheme.
	tender/items/classification/description	Description: A textual description or title for the classification code.

	tender/items/deliveryLocation/description	Description: A name or description of this location. This might include the name(s) of the location(s), or might provide a human readable description of the location to be covered. This description may be used in a user-interface.
	tender/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	tender/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	tender/items/deliveryAddress/region	Region: The region. For example, CA.
	tender/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.
	tender/items/deliveryAddress/countryName	Country name: The country name. For example, United States.
Tender Participation Fees	Participation fees: Any fees applicable to bidders wishing to participate in the tender process. Fees may apply for access to bidding documents, for the submission of bids or there may be a win fee payable by the successful bidder.	
	tender/participationFees/methodOfPayment	Method(s) of payment: Optional information about the way in which fees can be paid.
	Value: The monetary value of this fee.	
	tender/participationFees/value/amount	Amount: Amount as a number. Note: The field on eTenders referenced here always relates to the cost of the bid documents only.
	tender/participationFees/value/currency	Currency: The currency of the amount, from the closed currency codelist. https://drive.google.com/open?id=1UThR89OLMq3uWmy0q4q58SBI3O0WJ6X8
	tender/participationFees/type	Fee type: A fees applicable to bidders wishing to participate in the tender process. Fees may apply for access to bidding documents, for the submission of bids or there may be a win fee payable by the successful bidder.
	tender/participationFees/description	Description: Optional information about the way in which fees are levied, or the exact nature of the fees.
	tender/participationFees/totalBidCost	Any costs involved with bidding
	tender/participationFees/totalProcurementCosts	Costs of the whole process - amendments, contract costs, inspection costs etc, any costs that a supplier must incur to participated in the bidding process
South African legislation requires standard general conditions of contract and special conditions of contract to be published in the tender documents. These fields are required within these documents.		
When a tenderUpdate release amends the previous call for tenders it is recommended to provide the following information to make explicit that an amendment has been provided		
Tender Amendments	Amendments: A tender amendment is a formal change to the tender, and generally involves the publication of a new tender notice/release. The rationale and a description of the changes made can be provided here.	
	tender/amendments/date	Amendment date: The date of this amendment.
	tender/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	tender/amendments/rationale	Rationale: An explanation for the amendment.
Update release once the tender has closed. Tenders move from the 'advertised tenders' section to the 'closed tenders' section of the portal on the closing date.		

	tender/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
Update release if the tender is cancelled. Tenders move from the 'advertised tenders' section to the 'cancelled tenders' section of the portal.		
	tender/cancellationRationale	Reason for cancelling the tender
At the award stage, the following information may be provided (in addition to information from the planning and tender stages, and general information)		
	awards/mainProcurementCategory	Main procurement category: The primary category describing the main object of this contracting process, from the closed procurementCategory codelist. Note: The OCDS codelist includes goods, works and services. The categories on eTenders are slightly different to this e.g. medical supplies, health services but can be mapped back to goods, works and services with further analysis of the tender document. For the purposes of this catalogue, we have considered the eTenders categories under this field.
	Contract period: The period for which the contract has been awarded. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	
	awards/contractPeriod/endDate	End date: The end date for the period. When known, a precise end date must be provided.
	awards/contractPeriod/maxExtent Date	Maximum extent: The period cannot be extended beyond this date. This field can be used to express the maximum available date for extension or renewal of this period.
	awards/datePublished	Date the award was publically published by the publisher
Directors	The eTender portal publishes the name and start date of all directors of the supplier business.	
	parties/identifier/namesOfDirectors	Names of supplier's directors
	parties/identifier/directorStartDate	Dates when director's started at the company
Address	Address: An address. This may be the legally registered address of the organization, or may be a correspondence address for this particular contracting process. An address.	
	parties/address/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	parties/address/locality	Locality: The locality. For example, Mountain View.
	parties/address/region	Region: The region. For example, CA.
	parties/address/postalCode	Postal code: The postal code. For example, 94043.
	parties/address/countryName	Country name: The country name. For example, United States.
Contact point	Contact point: Contact details that can be used for this party. A person, contact point or department to contact in relation to this contracting process.	
	parties/contactPoint/name	Name: The name of the contact person, department, or contact point, for correspondence relating to this contracting process.
	parties/contactPoint/email	Email: The e-mail address of the contact point/person.
	parties/contactPoint/telephone	Telephone: The telephone number of the contact point/person. This should include the international dialing

		code.
	parties/contactPoint/faxNumber	Fax number: The fax number of the contact point/person. This should include the international dialing code.
	parties/contactPoint/url	URL: A web address for the contact point/person.
	parties/publicAndPrivatePartnershipDetails	<ul style="list-style-type: none"> - name private and public partners - tor between the two? - scope of works? - feasibility study - are these documents displayed at the local government offices and on its official website
	Parties/datePPPDDetailsPublished	Date any PPP details are published

[Use the codelist mapping template to map the documents in your system to the documents recommended for publication as part of an open contracting implementation.](#)

For each document related to the award stage you may provide:

Awards Documents	Documents: All documents and attachments related to the award, including any notices.	
	awards/documents/documentType	Document type: A classification of the document described, using the open documentType codelist.
	awards/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	awards/documentSubmissionDate	Date documents were submitted
	awards/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	awards/documents/dateModified	Date modified: Date that the document was last modified
	awards/documents/format	Format: The format of the document, using the document format open codelist For example, web pages have a format of 'text/HTML'.
	awards/documents/language	Language: The language of the linked document using lowercase two-letter codes from ISO639-1.

For each line item you may provide the following details

Awards Items	Items awarded: The goods and services awarded in this award, broken into line items wherever possible. Items should not be duplicated, but the quantity specified instead.	
	awards/items/description	Description: A description of the goods, services to be provided.
	awards/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	awards/items/unit/name	Name: Name of the unit. According to OCDS recommended classification system: UN/CEFACT Recommendation 20
	awards/items/classification/countryOfOrigin	The place where the goods were mined, grown or produced or from which the services are supplied
	Additional classifications: An array of additional classifications for the item.	
	awards/items/additionalClassifications/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	awards/items/additionalClassifications/id	ID: The classification code taken from the scheme.

	awards/items/additionalClassifications/description	Description: A textual description or title for the classification code.
	awards/items/additionalClassifications/uri	URI: A URI to uniquely identify the classification code.
Value: The monetary value of a single unit. Financial values should be published with a currency attached.		
	awards/items/unit/value/amount	Amount: Amount as a number.
	awards/items/importedContentValue/amount	Amount in currency (rands) of the contract price that will be spent on imported items
	awards/items/localContentValue/amount	Amount in currency (rands) of the contract price that will be spent on locally manufactured items
	awards/items/deliveryAddress/streetAddress	Street address: The street address. For example, 1600 Amphitheatre Pkwy.
	awards/items/deliveryAddress/locality	Locality: The locality. For example, Mountain View.
	awards/items/deliveryAddress/region	Region: The region. For example, CA.
	awards/items/deliveryAddress/postalCode	Postal code: The postal code. For example, 94043.
	awards/items/deliveryAddress/countryName	Country name: The country name. For example, United States.
When a awardUpdate release amends a previous award it is recommended to provide the following information to make explicit that an amendment has been provided		
Awards Amendment	Amendments: An award amendment is a formal change to the details of the award, and generally involves the publication of a new award notice/release. The rationale and a description of the changes made can be provided here.	
	awards/amendments/date	Amendment date: The date of this amendment.
	awards/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	awards/amendments/rationale	Rationale: An explanation for the amendment.
When unsolicited bids are received by the procuring entity		
Unsolicited Bids	unsolicitedBids/publisher	Publisher of the unsolicited bid details (entity name)
	unsolicitedBids/reasonsForDenial	Reasons for not accepting the unsolicited bid
	unsolicitedBids/datePublished	Date the unsolicited bid details were published
Bids: The bid extension allows bid statistics, and detailed bid information to be represented in the bid section. Awards can be related to a specific bid.		
Bid statistics	Statistics: Summary statistics on the number and nature of bids received. Where information is provided on individual bids, these statistics should match those that can be calculated from the bid details array.	
	bids/statistics/measure	Measure: An item from the bidStatistics codelist for the statistic reported in value. This is an open codelist, and other statistics may also be included.
	bids/statistics/id	ID: An internal identifier for this statistical item.
	bids/statistics/value	Value: The value for the measure in question. Total counts should be provided as an integer. Percentages should be presented as a proportion of 1 (e.g. 10% = 0.1)
	bids/statistics/date	Date: The date when this statistic was last updated. This is often the closing date of the tender process. This field can be left blank unless either (a) the same statistic is provided from multiple points in time, or (b) there is a specific local requirement for the date when statistics were calculated to be provided.

	bids/statistics/relatedLot	Related Lot: Where lots are in use, if this statistic relates to bids on a particular lot, provide the lot identifier here. If left blank, the statistic will be interpreted as applying to the whole tender.
	bids/statistics/notes	Notes: Any notes required to understand or interpret the given statistic.
Bid details	Bid details: An array of bids, providing information on the bidders, and where applicable, bid status, bid values and related documents. The extent to which this information can be disclosed varies from jurisdiction to jurisdiction.	
	bids/details/status	Status: The status of the bid, drawn from the bidStatus codelist
Bid documents	Documents: All documents and attachments related to the bid and its evaluation.	
	bids/details/documents/id	ID: A local, unique identifier for this document. This field is used to keep track of multiple revisions of a document through the compilation from release to record mechanism.
	bids/details/documents/document Type	Document type: A classification of the document described, using the open documentType codelist.
	bids/details/documents/title	Title: The document title.
	bids/details/documents/description	Description: A short description of the document. Descriptions are recommended to not exceed 250 words. In the event the document is not accessible online, the description field can be used to describe arrangements for obtaining a copy of the document.
	bids/details/documents/url	URL: A direct link to the document or attachment. The server providing access to this document ought to be configured to correctly report the document mime type.
	bids/details/documents/datePublished	Date published: The date on which the document was first published. This is particularly important for legally important documents such as notices of a tender.
	bids/details/documents/dateModified	Date modified: Date that the document was last modified
	bids/details/documents/format	Format: The format of the document, using the open IANA Media Types codelist (see the values in the 'Template' column), or using the 'offline/print' code if the described document is published offline. For example, web pages have a format of 'text/HTML'.
	bids/details/documents/language	Language: The language of the linked document using either two-letter ISO639-1, or extended BCP47 language tags. The use of lowercase two-letter codes from ISO639-1 is recommended unless there is a clear user need for distinguishing the language subtype.
Tenderer	Tenderer: The party, or parties, responsible for this bid. This should provide a name and identifier, cross-referenced to an entry in the parties array at the top level of the release.	
	bids/details/date	Date: The date when this bid was received.
At the contract stage, the following information may be provided (in addition to information from the planning, tender and award stages, and general information)		
Contract information	contracts/id	Contract ID: The identifier for this contract. It must be unique and must not change within the Open Contracting Process it is part of (defined by a single ocid). See the identifier guidance for further details.
	contracts/description	Contract description: Contract description
Period	Period: The start and end date for the contract. Key events during a contracting process may have a known start date, end date, duration, or maximum extent (the latest date the period can extend to). In some cases, not all of these fields will have known or relevant values.	

	contracts/period/startDate	Start date: The start date for the period. When known, a precise start date must be provided.
	contracts/period/endDate	End date: The end date for the period. When known, a precise end date must be provided.
Value	Value: The total value of this contract. A negative value indicates that the contract will involve payments from the supplier to the buyer (commonly used in concession contracts). Financial values should be published with a currency attached.	
	contracts/value/amount	Amount: Amount as a number.
	contracts/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Items	Items contracted: The goods, services, and any intangible outcomes in this contract. Note: If the items are the same as the award do not repeat.	
	contracts/items/description	Description: A description of the goods, services to be provided.
	contracts/items/quantity	Quantity: The number of units to be provided.
	Unit: A description of the unit in which the supplies, services or works are provided (e.g. hours, kilograms) and the unit-price.	
	contracts/items/unit/name	Name: Name of the unit.
	contracts/items/unit/id	ID: The identifier from the codelist referenced in the scheme property. Check the codelist for details of how to find and use identifiers from the scheme in use.
	contracts/items/unit/scheme	Scheme: The list from which identifiers for units of measure are taken, using the open unitClassificationScheme codelist. 'UNCEFACT' is recommended.
	Classification: The primary classification for the item. A classification consists of at least two parts: an identifier for the list (scheme) from which the classification is taken, and an identifier for the category from that list being applied. It is useful to also publish a text label and/or URI that users can draw on to interpret the classification.	
	contracts/items/classification/scheme	Scheme: The scheme or codelist from which the classification code is taken. For line item classifications, this uses the open itemClassificationScheme codelist.
	contracts/items/classification/id	ID: The classification code taken from the scheme.
	contracts/items/classification/description	Description: A textual description or title for the classification code.
	contracts/items/unit/value/amount	Amount: Amount as a number.
	contracts/items/unit/value/currency	Currency: The currency of the amount, from the closed currency codelist.
Amendment	Amendments: A contract amendment is a formal change to, or extension of, a contract, and generally involves the publication of a new contract notice/release, or some other documents detailing the change. The rationale and a description of the changes made can be provided here.	
	contracts/amendments/id	ID: An identifier for this amendment: often the amendment number
	contracts/amendments/date	Amendment date: The date of this amendment.
	contracts/amendments/description	Description: A free text, or semi-structured, description of the changes made in this amendment.
	contracts/amendments/rationale	Rationale: An explanation for the amendment.
	contracts/amendments/value/originalContract	The original contract value
	contracts/amendments/value/contractExtension	The amended contract value
	contracts/amendments/value/priorExtension	Whether or not the contract has been amended prior to this amendment

	contracts/amendments/recommendedByAOorAA	
	contracts/amendments/support	Supported or not supported
	contracts/procuringEntity/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.
	contracts/supplier/name	Organization name: The name of the party being referenced. This must match the name of an entry in the parties section.

7.6. Missing Indicators

The following 52 indicators would be possible if all OCDS recommended fields were published.

Indicator	Fields Required	Comment_Gauteng
Collusion		
Lowest bid prices have a difference of less than 2.5%	tender/id bid/statistics/value	Only awarded bid prices are published.
Variation X% greater than mean for bid prices on similar items	tender/items	The item descriptions are not published uniformly and it is all published in PDF which is not being scraped.
When X supplier wins, same set of tenderers loses (at least twice)	awards/suppliers; tender/tenderers; tender/procuringEntity	It should be noted that the tenderer information is captured inconsistently and calculations using this field should be scrutinised closely for accuracy of data. There are bidder lists published in PDF however these do not have all the necessary bid details for this indicator and only the 33 awards published in HTML have PDFs attached. The awards published in PDF that were scraped for the data catalogue do not have bidder information attached.
Difference between bid prices is an exact percentage (whole number)	bid/statistics/value	Only awarded bid prices are published.
Losing bid prices are unrealistic	bid/statistics/value	Only awarded bid prices are published.
Collusion, Fraud, Value for Money		
The percent gap between 2 bids by the same bidder for similar items is: Greater than 20% (soft threshold); Greater than 30% (rigid threshold).	awards/value/amount; bid/statistics/value awards/items/unit/value/amount	No way to compare 2 similar tenders due to items not being published. Description not sufficient to understand details of the bid.
Persistently high or increasing bid prices compared to cost estimates, price lists or previous prices for similar jobs or industry averages	- tender/value/amount - tender/items/value/amount - tender/procurementEntity - bid/statistics/value	Cost estimates, price lists, previous prices and industry averages for items are all not published.
Efficiency of Procurement Process		
Days from bid plan approval to tender period start date	- tender/id - planning/bidPlan/approval (extension) - tender/tenderPeriod/startDate	No planning documents published.
% of procurements whose implementation times comply with legal requirements	- Results of above indicators - Thresholds for legally required start/end periods for each phase	No implementation details published

Frequency of use of amendments in tender phase	- tender/id - tender/amendments/id - tender/amendments/description	No amendments are published on this portal.
% of procurements in which payment is made at least 60 days after last milestone complete	- contract/id - contract/implementation/milestones - contract/period/endDate - contract/status	No implementation milestone / payment details published.
Percent of contracts which are canceled	contracts/id contracts/status	Contract cancellations not published
Fraud		
Common contact details between procuring entities and suppliers	tender/procuringEntity/contactPoint/telephone; awards/suppliers/contactPoint; tender/procuringEntity/address; awards/suppliers/address	Only the suppliers' name is published and no other contact information is given.
Winning supplier's address is a PO Box (consider: Address of payment is PO Box)	parties/address (supplier) or parties/address/streetAddress	Winning supplier's address is not published on the portal
Supplier is less than 12 months old and has never submitted a bid for another contract	awards/suppliers; tender/tenderers	Unable to establish supplier's age from published information
Common contact details between suppliers	awards/suppliers/address; awards/suppliers/faxnumber; awards/suppliers/streetAddress; awards/suppliers/contactPoint	Winning supplier's contact details are not published on the portal
Only winning bidder was eligible for a tender that had multiple bidders	tender/tenderers; awards/suppliers; awards/status	No information on eligibility/qualification of tenderers is published.
Market Opportunity / Competitiveness		
Percent of tenders with at least three participants deemed qualified	tender/id tender/numberOfTenderers OR tender/tenderers/identifier/id bids/validBids (Bid Extension)	No information on eligibility/qualification of tenderers is published.
Share of contracts awarded to small and medium-size enterprises (SMEs)/ Total amount of contracts awarded to SMEs	- contract/id - contract/value - SME data field (extension)	No SME data field. Potential to use BBBEE points claimed.
Share of contracts awarded to international companies vs. local firms	- contract/id - parties/address/countryName (suppliers)	No information about whether the supplier is local or foreign is published.
Mean number of bidders by item type	tender/id tender/tenderers/identifier/id tender/items/id	No details available on bidders nor per item at bid or award release.
Percent of new tenderers to all tenderers	awards/id awards/suppliers/identifier/id tender/tenderPeriod/endDate	Only the 33 awards published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated.
Mean number of tenderers per tender	tender/id tender/numberOfTenderers OR tender/tenderers/id	Only the 33 awards published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated.
Process Rigging		
Winning bid is lower than other	awards/suppliers;	No information on bidders price published on portal

bids by 25% minimum (when there are two or more bids)	tender/tenderers; bid/statistics/value	
Supplier receives multiple single-source/non-competitive contracts from a single procuring entity during a calendar year	awards/suppliers; contracts/id; tender/procurementMethod = limited or direct; tender/procuringEntity	It is assumed that all awards are competitive but the procurement method is not stated.
Procurement plan recommends against sole source; sole source ultimately used	procurementMethodDetails	Procurement plans are not published.
Supplier receives multiple sole source awards approved by same official	awards/suppliers; tender/procurementMethodDetails	Procurement method not stated, it can be assumed that all tenders are competitive.
Change orders (amendments) increase price beyond initial contract price (or some % above initial contract price) when contract is sole source and within 5% of bid threshold	contracts/value/amount; tender/procuringEntity; awards/suppliers; contracts/implementation/transactions/amount/amount; tender/procurementMethodDetails	No contract details have been published on portal
Difference between award and contract amount is greater than X%	awards/value/amount; contracts/value/amount	Contract values are not published on the portal. Sidenote: Contracts are only published on SA DOH.
Complaint = changes to bids, winning bidder was involved in contracting process, winning bidder was involved in contracting process		Complaints not published
Percent of tenders and value awarded by means of competitive procedures and sole source procedures	tender/procuringEntity; tender/procurementMethod; award/value/amount	It is assumed that all awards are competitive but the procurement method is not stated.
Process Rigging & Market Opportunity		
Ratio and mean of bids which are disqualified	tender/tenderers	There is no field published for 'disqualified bidders'
Process Rigging & Collusion		
Success rate of tenderers (bidders)	bid/bidders; awards/suppliers; tender/procuringEntity	Only the 33 awards published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated. The bidder lists that are published in PDF with names of suppliers are inconsistent and no information is published about unsuccessful bidders.
Lowest bidder does not meet award criteria	tender/tenderers	Only the 33 awards published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated. The bidder lists that are published in PDF with names of suppliers are inconsistent and no information is published about unsuccessful bidders.
Awarded competitive tender only featured a single bid/tenderer	bids/details/tenderers/name	Only the 33 awards published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated.
Public Integrity		
% of tenders that use the planned procurement method	- tender/id - planning/procurementMethod (extension)	It is assumed that all awards are competitive but the procurement method is not stated

	- tender/procurementMethod	
Percent of tenders with linked procurement plans	tender/documents/documentType (=procurementPlan)	No procurement planning details have been published on the portal
Publication of contracts (when an award has been made)	awards/id awards/date contracts/id contracts/documents/documentType (=contractNotice)	Contracts and date of awards are not published on the portal.
Public Integrity & Process Rigging		
Frequency of use of amendments in contracting phase (disaggregated by reason, supplier and procuring entity)	tender/id tender/procuringEntity contracts/id -contracts/amendments/rationale contracts/procuringEntity/name	No contract details have been published on the portal and so there is no information on contract amendments.
Reporting & Descriptive Analytics		
Number and value of awards by procurement category	- tender/id - tender/procurementCategory - tender/value	Awards release has been used as a proxy for tenders release. Procurement categories are unique to Gauteng (not standard OCDS).
Transparency & Disclosure of Procurement Process		
Percent of contracts which publish contract implementation details (physical and financial)	contracts/implementation/transactions/id contracts/implementation/transactions/amount contracts/implementation/transactions/currency	Contracts are not published on the portal except for start and end dates.
Publication of awards with links to tender adverts	- awards/id - tender/documents/tenderNotice	Awards published in HTML have links to the tender adverts, however it requires unique links to be followed on a case by case basis. Awards published in PDF which have been scraped for the data catalogue do not have advert links attached.
No. of complaints received (total, per PE/per time period) & percent of tenders w/ complaints	- tender/id - tender/procuringEntity - Number of complaints (extension)	Complaints aren't published
No. & percent of complaints resolved (total, per PE/per time period/time it takes to resolve)	- tender/id - tender/procuringEntity - complaints ID (extension) - answers ID (extension)	Complaints aren't published
Supplier blacklist published and updated [regularly] - Number of suppliers on blacklist	- tenders/suppliers/id - blacklist ID (extension)	The portal does not publish a list of blacklisted suppliers.
Percent of tenders that do not include detailed item codes or item descriptions	- tender/id; - tender/items/id - tender/items/description OR tender/items/classification/id	Tender items are not published on the portal.
% of tenders that don't publish basic unsuccessful bidder information	awards/id a) bids/details/tenderers/name b) bids/details/totalPointsAwarded c) bids/details/value/amount	No unsuccessful bidder details or points awarded have been published.
The names of bidders in an advertised competitive bid – and where practical- the total price	tender/id bids/details/tenderers/name bids/details/value/amount	Gauteng only publishes names and points awarded to suppliers who are awarded the tender and this information has been scraped. Only the 33 awards

and any preference claimed by the bidders are published within 10 working days after the bid closed and remain on the website for at least 30 days	bid/details/bbbeePointsClaimed bid/details/datePublished	published in HTML have a list of bidders attached in PDF, however these have not been scraped and so this indicator cannot be calculated. The bidder lists that are published in PDF with names of suppliers are inconsistent and no information is published about unsuccessful bidders.
Value for Money		
Percent of contracts that exceed budget and mean percent overrun (and vice versa: percent of contracts that are completed on time and to budget).	contracts/status planning/budget/amount/amount awards/value/amount contracts/implementation/transac tions/amount contracts/id contracts/period/endDate contracts/implementation/milesto nes/dueDate contracts/implementation/milesto nes/dateMet	Only contract information published is start and end date.
Total percent savings (difference between tender value / budget estimate and contract value)	tender/id tender/value/amount OR planning/budget/amount contracts/id contracts/value/amount	Insufficient information published. Too difficult to link projects from planning to contract stage.
Amount of cancelled funding at the contract stage by cancellation reason	- tender/id - tender/status - tender/value - contracts/id - contract/status - contracts/value - cancellation reason (extension required)	Value not published at the cancellation release. Contract cancellations not published at all.
% difference in final payment amount vs. contract amount	- contracts/value/amount - contracts/implementation/transac tions/	No contract payment information published



Annexure 8



Annexure 8: Use Case Prioritisation, Indicators and Fields

The table below shows the use cases in order of priority, with the top ranked use case being the one that is most important to most user groups (according to international research - to be confirmed locally through engagements).

Use case	Government	Private sector	Civil society organisations and the media	International organisations and donors	Rank
Transparency & Disclosure of Procurement Process					1
Collusion					2
Fraud					2
Reporting & Descriptive Analytics					2
Public Integrity					3
Value for Money					3
Process Rigging					4
Market Opportunity / Competitiveness					5
Efficiency of Procurement Process					6

The table below provides a list of indicators linked to the above use cases, together with the main fields required. This is to assist stakeholders with prioritising which fields to publish first and which indicators to consider first. This is a general guide only, which requires refinement based on context.

User Need	Indicators	Fields
Transparency & Disclosure of Procurement Process	Awards are published for every bid and within xx number of days	All basic tender and award information (importantly, party details, dates, values, preference points) Bidder details, Blacklisted suppliers, Complaints, Dates, ID linking all stages,
	No. & percent of complaints resolved (total, per PE/per time period/time it takes to resolve)	
	No. of complaints received (total, per PE/per time period) & percent of tenders w/ complaints	
	Percent of contracts which publish contract implementation details (physical and financial)	

	Percent of tender adverts that don't publish basic tender information	Implementation milestones and payments, Item details (name, quantity and value)
	Percent of tender awards that don't publish basic award information	
	Percent of tenders that do not include detailed item codes or item descriptions	
	Percent of tenders that don't publish basic unsuccessful bidder information	
	Publication of awards with links to tender adverts	
	Supplier blacklist published and updated [regularly] - Number of suppliers on blacklist	
	The names of bidders in an advertised competitive bid – and where practical- the total price and any preference claimed by the bidders are published within 10 working days after the bid closed and remain on the website for at least 30 days	
Collusion	Difference between bid prices is an exact percentage (whole number)	Bid values (total and itemised); Cost estimates (itemised); Tenderer, supplier and procuring entity details
	Losing bid prices are unrealistic	
	Lowest bid prices have a difference of less than 2.5Percent	
	Persistently high or increasing bid prices compared to cost estimates, price lists or previous prices for similar jobs or industry averages	
	The percent gap between 2 bids by the same bidder for similar items is: Greater than 20Percent (soft threshold); Greater than 30Percent (rigid threshold).	
	Variation XPercent greater than mean for bid prices on similar items	
	When X supplier wins, same set of tenderers loses (at least twice)	
Fraud	Common contact details between procuring entities and suppliers	All parties contact details and tender history (requires party ID and searchable database of historical bids)
	Common contact details between suppliers	
	Only winning bidder was eligible for a tender that had multiple bidders	
	Supplier is less than 12 months old and has never submitted a bid for another contract	
	Winning supplier's address is a PO Box (consider: Address of payment is PO Box)	
Reporting & Descriptiv	List of largest procurements	Procurement category, Award value,
	List of largest procuring entities	

e Analytics	Number and value of awards by procurement category	Procuring entities details and history
	Number of tenders advertised by government level (national, provincial, local)	
Public Integrity	Frequency of use of amendments in contracting phase (disaggregated by reason, supplier and procuring entity)	Procurement method, Procurement plans, Contract documents and amendments
	Percent of tenders that use the planned procurement method	
	Percent of tenders with linked procurement plans	
	Publication of contracts (when an award has been made)	
Value for Money	Amount of cancelled funding at the contract stage by cancellation reason	Contract status, Planning budgets, Award values, Implementation payments, Milestone achievement dates, Cancelled contract details
	Percent difference in final payment amount vs. contract amount	
	Percent of contracts that exceed budget and mean percent overrun (and vice versa: percent of contracts that are completed on time and to budget).	
	Total percent savings (difference between tender value / budget estimate and contract value)	
Process Rigging	Awarded competitive tender only featured a single bid/tenderer	Bid values (total and itemised); Bidder details, Procuring entity, Supplier details and value, Procurement method, Milestone dates, Contract prices, Implementation payments
	Change orders (amendments) increase price beyond initial contract price (or some Percent above initial contract price) when contract is sole source and within 5Percent of bid threshold	
	Complaint = changes to bids, winning bidder was involved in contracting process, winning bidder was involved in contracting process	
	Difference between award and contract amount is greater than XPercent	
	Key tender documents are not available through online platform during tender period	
	Lowest bidder does not meet award criteria	
	No. of procuring entities that issue two awards to same company for same/similar item below procurement threshold	
	Percent of tenders and value awarded by means of competitive procedures and sole source procedures	
	Procurement plan recommends against sole source; sole source ultimately used	
	Procuring entities that issue two awards to same company where the second award is xPercent larger than the first	
	Ratio and mean of bids which are disqualified	

	Success rate of tenderers (bidders)	
	Supplier receives multiple single-source/non-competitive contracts from a single procuring entity during a calendar year	
	Supplier receives multiple sole source awards approved by same official	
	Tendering period less or more than 21 days	
	Winning bid is lower than other bids by 25Percent minimum (when there are two or more bids)	
Market Opportunity / Competitiveness	Mean number of bidders by item type	Adjudication and bidder details, Contract details, Supplier details (SME/local), Procuring entity, Parties' tender history
	Mean number of tenderers per tender	
	Mean number of unique suppliers per procuring entity	
	Number and value of awards to new (first time) suppliers and conversely to repeat suppliers	
	Percent of new tenderers to all tenderers	
	Percent of tenders with at least three participants deemed qualified	
	Share of contracts awarded to international companies vs. local firms	
	Share of contracts awarded to small and medium-size enterprises (SMEs)/ Total amount of contracts awarded to SMEs	
Efficiency of Procurement Process	Days from award date to start of implementation	Planning documents, Milestone dates (decisions, published and achieved), Contract details
	Days from bid plan approval to tender period start date	
	Days from tender close to award date	
	Days from tender start to award date	
	Frequency of use of amendments in tender phase	
	Percent of contracts which are canceled	
	Percent of procurements in which payment is made at least 60 days after last milestone complete	
	Percent of procurements whose implementation times comply with legal requirements	
	Percent of tenders using electronic bidding	
	Proportion of canceled tenders to awarded tenders and total tender adverts	



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