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## Introduction

Over the past few months, we have been speaking to quite a few stakeholders in our community of practice about how they are using (or seeking to use) contracting information. We have also held some great web meetings with practitioners and have captured learnings from country missions to Mexico and Nepal, where the Open Aid Partnership has been conducting an Open Contracting pilot. The objective of these meetings and consultations has been to capture the real needs and circumstances of the publishers and users of public contracting data – to demonstrate what can and could be done with open contracting data and to shape the development of the Open Contracting Data Standard.

In our consultations thus far with government, civil society, donors, journalists, auditors, and the private sector, four primary use cases emerged. These users are wishing to use open contracting data in order to:

- Achieve value for money for the government;
- Strengthen the transparency, accountability and integrity of public contracting;
- Enable the private sector to compete for public contracts; and
- Monitor service delivery (from both aid and budget-executed projects) for effectiveness.

This document presents these 4 use cases, which have been translated into requirements for the OCDS [here](#) before concluding with a discussion of the prioritized demands for the Open Contracting Data Standard. :

## 1. Using Contracting Data to Achieve Value for Money

### Who is this user and what is their objective?

Generally speaking, this user is anyone interested to research how government agencies spend money for future improvement of procurement processes, government assets management and contract management. In a centralized system, this user might be within a procurement agency tasked with overseeing all government procurement. In a decentralized system, this user might be within an implementing agency (such as a department of health). This user could also be the vendor supplying systems and platforms to government. This user is interested knowing whether the procuring entities are getting good value for money when purchasing goods, works and services to implement their work program. Auditors, oversight authorities, academics and civil society will also be interested in this use case.

### What contracting information does this user need and for what purpose?

In many ways, for a contract to have “value for money” we mean a contract that is implemented competently (in a quality manner and in accordance with specifications) in a timely manner (achieving specified milestones by the specified dates) for a competitive price (at or below estimate).

At the planning stage, this user would be interested to prepare informed estimates of cost and duration, and to establish what type of procurement process would be most appropriate. To do this, the user would be interested in comparing previous similar contracts from the same and other procuring entities. This would involve looking for contracts for the same or similar goods, works, and services, comparing unit prices paid (if the information is available) and duration. The user would also be interested to see which contractors are currently or have held similar contracts in the past, and which contractors have been bidding on these similar contracts (to get a sense of the competition and capacity in the market).

This user wants to control material and component costs (thus improving margins). This user might seek to reduce the risks of a project by breaking up the composite pieces and issuing multiple contracts to different contractors to encourage better value for money and competition for each discrete piece of work, rather than one contract to one supplier (who might then issue multiple sub-contracts). This approach also lends itself to the increased participation of small and medium sized enterprises, widening competition to include smaller players. This user would be interested to know unit price information for the goods, services it seeks to procure, both market price and price previously paid for the same or similar goods or services (by the same or other agencies over a recent period of time) in order for to make accurate estimates for planned procurements and to evaluate bids to see whether prices are truly competitive.

During the procurement process, this user is interested in increasing competition (number of valid bids) to increase the chance that the best combination of price and quality can be achieved. This involves making sure that the widest number of potential contractors are aware of the opportunity, and that the burdens or barriers to bidding are not so high as to exclude good bidders.

This user is interested in bidders with the capacity to undertake and deliver on the contract, meaning that this user might be interested in pre-qualification of bidders. This user would be interested in comparing the bidders with their past performance, whether with their own agencies or others. This user would be interested in constructing a supplier profile to see how many current contracts they hold (to see whether they might be over-burdened with many active and overdue contracts), whether their past performance has been on or behind schedule, and to see their past pricing for similar goods or services. But, for contracting officials, assessing and relying on contractors’ past performance can carry a risk, too. Losing bidders could challenge past performance assessments in bid protests, and contracting officials then could find themselves wrapped up in months or years of post-award litigation. This user would also be interested in framework contracts and a tool to use to search and find active suppliers, details about the goods, works and services they offer, and pricing information (perhaps like Cloudstore: <http://govstore.service.gov.uk/cloudstore/>).

During performance, this user may wish to monitor that contract obligations are being carried out on time and under budget. This user is interested to keep on track of the supplier performance with a goal of improving performance by identifying the worst-performing suppliers in terms of schedule adherence or pricing inconsistencies. If there are multiple contracts as part of the same project, this user will need to be able to group the data from these contracts together to better manage them.

Finally, this user will want to show trends related to contract performance over time and to track savings (or spending).

### **How is this user currently getting access to this information?**

In many situations, much of this information is locked into silos in legacy systems (whether digital or paper based). Many organizations completely lack any planning applications or platforms, relying instead on complex spreadsheets, which introduce risk and diminish collaboration. Consequently, it takes too long to create procurement forecasts with reliable data, since there often isn't a consolidated, curated source of necessary information coming from various transactional and planning systems. Consequently, there is no ability to assess the effectiveness of plans and react quickly to changes. Traditionally, analytic and planning applications have been a build-your-own affair, with each entities independently collecting requirements, extracting data, combining that data in a data warehouse, and then providing users query and reporting tools to build their own analyses. Planning "applications" are often a complex collection of interlinked spreadsheets.

Building systems to compile, store and analyze this data is a challenge because requires analytic applications, integration of technologies and systems, extracting data from ERP and other enterprise systems, conforming and modeling the data, defining best practice metrics and key performance indicators, procurement planning models, and to make all that compelling and easily usable by a range of users. Extracting data from complex transactional schemas of enterprise applications, consolidating and integrating data from heterogeneous systems and applications, and reconciling and validating data quality are all specialized skills and the work takes time. Skilled data architects, data warehouse designers and ETL programmers, or costly business intelligence tools are needed. Also, it is difficult for procuring entities to voice their requirements for analytics. They don't know what is possible or what peers are doing. Requests for requirements are often answered with "don't know" or "give me everything."

But, creating dashboards and databases of consolidated information is something that is increasingly getting attention from procuring entities and the vendors that are creating these systems (Cloudstore being one example that is public facing, Oracle and other firms have created similar systems.).

### **How would this user like to have access to this information? What else would they like to have?**

- One common identifier across all providers (including foreign firms)
- Common categories across, so contracts contain in their URI (which each procurement exercise gets) segment (IT, stationary, furniture), provider (when awarded) and resolve to a page providing detailed information on the contract (a contract record), the provider (which links back to other sources), milestones for delivery and current expenditure against milestones. Query-able and downloadable. URI allows systems to query across procurement data to find given provider and the contracts for which they bid/won and other combinations
- Dashboards with visualizations to enable organizations to have a complete picture of the performance of their suppliers, including complete supplier scorecards, supplier price performance, delivery performance, product receipt quality, on-time payment ratings, payment activity and volume, and payments due/overdue analysis.

## **2. Using Contracting Data to Strengthen the transparency, accountability and integrity of public contracting**

### **Who is this user and what is their objective?**

This user is anyone seeking to use contracting data to identify or prevent fraud or corrupt practices in public procurement. This user wants to closely scrutinize procurement documents and data for 'red flags' or indicators of such practices in order to ensure that public monies are not stolen and that they will benefit those for whom they are intended. Transparency of information that enables such analysis can result in strengthened integrity of procurement systems and prevention of such practices.

All stakeholders (civil society, media, the private sector, government, and donors) have an interest in preventing, identifying, and combating corruption in public contracting. This user could therefore be a civil society contract monitoring organization, an anti-corruption watchdog or authority, an auditor, a procuring entity, procurement authority, a donor organization, researchers, investigative journalists, or an unsuccessful bidder.

As such, this user is on the lookout for indicators of subverting the procurement process to:

- Avoid competition through, e.g., unjustified sole sourcing or direct contracting awards.
- Favor a certain bidder by tailoring specifications, sharing inside information, etc.
- Exclude qualified bidders through, e.g., restricted circulation of advertisements, biased evaluation processes, or bid tampering.
- Avoid detection of the schemes by negotiating the removal of audit rights, using shell companies to disguise a conflict of interest, subcontracting.

There is a strong correlation between the above practices and 'white elephant' projects characterized by increased cost and duration of public contracts.

There are two main ways of monitoring procurement for fraud corruption. One is a 'micro' project-specific approach in which monitors closely scrutinize individual procurements. The other is a systemic approach, identifying suspicious patterns within a market or actor's behaviour (i.e. all public procurement by a government, agency, or contractor). The systemic approach is only possible with structured public contracting data. To a maximum effect the two approaches build on each other where a project-specific approach considers the environment and benchmarks of the project in question and the systemic analysis directly follows from micro-evidence. Either way, this user is looking for "red flags" that are indicative of corrupt practices.

### **What contracting information does this user need and for what purpose?**

A user wishing to monitor a specific project will want all documents relating to the procurement, from the planning, tender, award, implementation, and termination.<sup>1</sup> For this approach structured data ready for quantitative analysis is less crucial. Documents of interest, and purpose, include:

Planning Stage	
Document Name and Description	Purpose of the User
Needs Assessment This document outlines the process used to determine that the proposed procurement should be funded.	Review the enumerated pros and cons for the project along with the cost estimates to see whether the recommendations or decisions with regard to the procurement seem reasonable.  Identify red flags such as, cost estimates that don't seem to be realistic or accurate, recommendations that do not match the course of action ultimately taken in the procurement, the use of inaccurate information as the basis of the decision (i.e. a recommendation to build a new school when there is already a school nearby)
Public hearing announcement(s)	Know the date of the announcement, the date(s) and location(s) of the hearings, the method of the announcement, who is running the hearing(s), and whether there is an option to send comments in writing in order to assess whether a meaningful or good faith effort to conduct the public hearing took place.
Written public comments received	Compare the public comments with what is communicated in the needs assessment to evaluate if the recommendation meets the needs identified by the public.
Notes summarizing comments received at public hearings	See whether the organizer of the hearing actually took down a summary to indicate that there is some consideration of the public's input, and to evaluate whether the planning documents take these comments into consideration.
Revisions to Needs Assessment	Assess whether the public feedback was taken into account in the decision making process.
Documents relating to bidder/contractor registration requirements	Compare the requirements, such as the size of the company (yearly turnover/sales), how many similar projects has the company completed, what size monetary value were those contracts, personnel certification requirements, in order to

<sup>1</sup> TI USA has developed a tool to assist monitors with this type of analysis:  
<http://monitoring.transparency-usa.org/docs/Monitoring%20Assistant%20-%20Excel%20Version.xlsx>

	compare with the characteristics of the company that ultimately won the contract award.
Tendering	
The invitation to bid /tender / request for proposals	Know the date of the announcement, the due date (to evaluate the time lapse between the two), the method of the announcement, the instructions for submission, the basic description of good or service required, and the geographic location for the procurement if applicable. This user wants to evaluate whether interested eligible potential bidders would have been likely to see this announcement and have the opportunity to bid;
Bidding documents	Know the evaluation criteria on which the bids or proposals will be judged, the mathematical formula to rate and rank the bids or proposal to evaluate whether the bidding documents give a sufficiently detailed description of what is wanted to be purchased (not too vague) without being unnecessarily restrictive (i.e. describing a car and not a Toyota).
Short-listing or pre-qualification decision	Know the companies that are shortlisted or pre qualified, so that the user can conduct their own evaluation using the criteria to satisfy themselves that the shortlisted companies are indeed qualified.
Any record relating to pre-bid conference any written correspondence between the procuring entity and the potential bidders	<ul style="list-style-type: none"> <li>• Know who attended, what were the questions raised by the bidders, did anything change in the bidding documents as a result of those questions.</li> <li>• Know the number and identities of firms who requested bid documents (if not publicly posted) and the number and identities of the firms who submitted bids in order to evaluate the level of competition.</li> </ul>
Submitted bids	Apply the evaluation criteria to the submitted bids to see whether they would arrive at the same result by calculating the difference between the lowest and highest bids. This would be done retrospectively in most cases (after the award of the contract) but in some places, like Mongolia and Mexico, civil society can observe the procurement selection process in real time.
Documents relating to bid/tender opening	Know the place, date, and time of the opening of the bid, to compare with the place, date, and time stated, and the list of companies from whom the bids were received.
Documents summarizing the identifies and qualifications of	Evaluate whether there might be a lack of qualification or a conflict of interest between the decision makers and the bidders.

those evaluating the competing bids/tenders	
<b>Award &amp; Execution of Contract</b>	
Award announcement	know the date of the award (to compare with the time delay since the day the bids were opened), the method of its publication (to verify that losing bidders had the opportunity to challenge the award), and the name of the company that was awarded the contract.
Signed contract	compare point by point the specifications in the signed contract to the technical specifications in the bidding documents for discrepancies with regards to inter alia amounts, delivery dates, geographic location.
<b>Performance &amp; Termination</b>	
Documents relating to evaluation and inspection of works, goods, services procured –	know whether the work being done under the contract is being done up to standards, and whether there are any time or cost overruns, the number of issues identified in need of correction, and whether delivery has been rejected. This user wants to know whether the evaluation has uncovered problems or whether the evaluation arrives at different conclusions than their own independent monitoring.
Any documents reflecting changes, extensions, or cancellations of contract	know whether the contract has run over the budgeted time and cost, whether a contract has been improperly extended or canceled.
Documents relating to any audit done of contract	know whether the auditor has uncovered cost/time overruns, or any other issues.
<b>Other</b>	
Documents relating to similar procurements, i.e. the same procuring entity, the same goods, works or services	see whether competitive bidding has been avoided by breaking the contract into smaller contracts.
Documents relating to any challenges to the award	know whether any of the other bidders objected to the process, and how different bids scored compared to the winning bid.

Systemic analysis builds on structured data which allows for comparing large amounts of contracts as well as actors over time. This approach uses, by and large, the same indicators as in the project-specific approach; however, requires a standard and reliable recording of information. One such systemic approach

is the Corruption Risk Index (CRI) methodology<sup>2</sup> which exploits the co-variation between public procurement red flags as identified by numerous authors and market outcomes such as single bid submitted to a contract. The construction of this Index crucially hinges upon unique actor identifiers such as registry ID of bidding firms and markets defined by procured products and location of performance.

Using public procurement data from Central and Eastern Europe the following components are used to construct the CRI:

- *Single bidder: whether only one bid was considered;*
- *Winner's contract share: share of contractor within all contracts awarded by the procuring authority over 12 months;*
- *Call for tender not published in official journal: whether a call for tenders announcement was published in the national public procurement bulletin;*
- *Procedure type: type of procurement procedure followed such as open competition;*
- *Length of eligibility criteria: character length of text defining which bidders are eligible to bid;*
- *Length of submission period: number of working days between the publication of call for tenders and the submission deadline;*
- *Relative price of tender documentation: price of obtaining tender documentation divided by total contract value;*
- *Call for tenders modification: whether the call for tenders announcement was modified during the submission period;*
- *Weight of non-price evaluation criteria: relative weight of subjective, non-price related evaluation criteria;*
- *Annulled procedure re-launched subsequently: whether a procedure has been cancelled and subsequently re-launched with modified conditions such as restricted instead of open procedure type;*
- *Length of decision period: number of days between the submission deadline and the date of announcing the winner;*
- *Contract modification: whether an awarded contract was modified during implementation in any significant way; and*
- *Contract value/duration increase: whether the overall contract value or total contract length was increased during contract implementation.*

The CRI composing of these items displays a range of characteristics which indicate its validity and a measure of corruption and use for anti-corruption efforts: For example, the higher the CRI of a procurement process, the more likely that the contract value exceeds its estimated value or contractors with high CRI values are more likely to be registered in tax heavens.

Procurement data can also be joined up with the following data, if available, to develop additional indicators:

- Company financial and registry data: annual turnover, annual profit, data of incorporation.
- Company ownership and management data: name, position, and stake.
- Political officeholder data: name, office/position, and party affiliation. Data comes from official list of elected officials and appointed office holders.
- Treasury accounts of public organisations: spending data.

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<sup>2</sup> For a more detailed discussion of this methodology, please see Mihály Fazekas and István János Tóth “Three indicators of institutionalised grand corruption using administrative data” (2014) <http://www.u4.no/assets/proxyworkshop/crcb-explanatory-note.pdf>.



- Court records of award challenges.

### **How is this user currently getting access to this information?**

Typically, civil society organizations engaged in project specific contract monitoring will access information that has been published publically (the announcements) (and maybe electronically available as PDFs), and obtain others through access to information requests. Or, they will have signed MOUs with the procuring entity, outlining the terms under which documents will be shared.

On the systemic side, users use computer algorithms (i.e. scraping) to collect and extract data and to put it into a structured database. However, information locked in PDFs, poor data quality, lack of identifiers and standardized taxonomies is a major barrier to these types of approaches.

### **How would this user like to have access to this information? What else would they like to have?**

This user would like to have all of the above information online in one place and available to the public, including disbursement information - one portal per government - Ideally as structured data as well as documents. This user would also appreciate simple data download methods and APIs.

This user would also like to have price data broken down into unit prices (price per unit of concrete rather than price for a road contract) so as to be able to compare whether prices are being inflated in the procurement process. Finally, in order to do the systemic analysis, this user needs identifiers for companies, procuring entities, and for contracts (in order to link tender, award and other data to a single record). This user would want one identifier for the ultimate beneficial owner and one for whatever subsidiary or corporate unit obtains or bids on the contract. One of the real problems that civil society monitors face is that one corrupt actor may use several different shell companies to bid on different procurements. If you then do a systemic analysis, it may appear that there is real competition as you will see that many different companies have obtained contracts; but if all these different companies belong to the same person, then there is in reality little competition. Unique identifiers for companies can enable monitors to verify owners of companies in applicable corporate registries (where that data is available).

## **3. Using Contracting Data to Compete for Public Contracts**

### **Who is this user and what is their objective?**

This user is in the private sector. They are either an entity seeking to win public contracts directly or an intermediary seeking to reuse data to provide innovative interfaces for business interested in government tender opportunities and government market research (examples of this time of intermediary include Devex, Govini, SpendNetwork, DG Market, UN Development Business, etc.) Prospective contractors are seeking to find appropriate opportunities for which they are eligible to bid or sub-contract.

One user might be in a revenue generating position at a company, they are looking for new advertisements, they want to know anything in the market for their search terms, they would like an email every day when something matches (a lead generator).

Another user is looking for something that isn't advertised but might be re-competed. A lot of contracts have extensions on them so knowing when these contracts end is really important. If there is a contract for software for 3 years, as a competitor this user wants to see the pricing information, the relevant dates, and the contact information.

The third user type is more of an analyst, using the data to better understand the trends in public contracting in the sector. Who is buying what, on what intervals, to get ahead of opportunities.

### **Which contracting information does this user want?**

This user is interested in capturing data at all stages of the lifecycle of the contract with particular interest in: planning, notice or pre-solicitation, the window to respond, the contract, the spend, the renewal or the expiry. Within tenders, businesses are interested in:

- Procurement plans (and planning processes);
- Budget information;
- Finding open opportunities in their sectors location details (as the vendor may only operate in a certain geographic area),
- Estimated amounts and timelines,
- Documents and technical specifications,
- Term contracts,
- Eligibility criteria and procurement conditions,
- Funders (in the case of aid projects),
- Implementation leads (in the case of subcontracts, and related tenders associated with the same project or program),
- Shortlists
- Contact information for the contracting authority (to start building relationships) and contractors.
- Planholders (interested parties for the contract, have requested contract documents from the agency or expressed interest)
- Meeting Attendees (similar to above, also helps vendors to identify potential partners/competitors and analyze the competitive landscape)
- Product and pricing considerations
- Type of opportunity: are they requesting a proposal to determine contract requirements? Is this a bid for a commodity? Etc.
- Changes in requirements (i.e. amendments) also come into play here

It would be very important for this user to link contracting and project information. For example, this user may want to link tenders to pre-solicitation documents or contract awards and shortlists to tenders. For many funders, these IDs are being generated from different systems and their workflow doesn't seem to enforce creating that linkage. A company might look at a tender and want to see what other tenders were issued from the same loan or as part of the same strategy and perhaps even see who was awarded the contracts.

Within contract awards, businesses are interested to know for contracts in their industry, who won, at what rate, for what services ,currency, amount, location and links to the tender for which the award was issued along with a description of the work being delivered, timeline. It would be valuable to have this information. This user would like to know the contracts that are sole-source and tenders where competition was limited for whatever reason, in order to look for subcontracting opportunities. This user would also like to track transactional level spending against contracts.

During planning, companies are interested to look at agency procurement plans to get an idea of what are the potential upcoming opportunities. Similarly, companies will be interested to know which current contracts will soon be up for renewal or re-competition. Likewise, this user would be interested in historical information to analyse the trend for who is investing in their sector.

### **How is this user currently using this information?**

Aggregators publishes tenders, grants, shortlists and contract awards across agencies who make this data available. Their focus is to both aggregate the information across different agencies but also to improve the data quality and usability for members by providing their own analysis, estimating project size, and providing tools for partnership formation, competitor analysis and company assessment by prospective employees.

Aggregators can enable search keywords (including search within documents), and searches by agency, country, language, vendor, vendor type, within custom time ranges, by amount (more than/less than), by industry (such as transportation and roads, business and financial services, public safety and defense, energy water and environment, IT and telecommunication, governance and education, healthcare and life sciences, and construction and maintenance), by NAICS codes, by PSC Codes, by NIGP Codes, by Common Procurement Vocabulary (CPV) codes, by Contract pricing type (such as cost no fee, cost plus award fee, cost plus fixed fee, cost plus incentive, cost sharing, firm fixed price, fixed price award fee, fixed price incentive, fixed price level of effort, fixed price redetermination, fixed price with economic price adjustment, labor hours, time and materials etc.), or other set aside criteria (like reserved for small business, female owned small business, minority owned small business etc), and notice types like (advance-notice, amendment, award, bid protest, cancellation, hold, justification and approval, sole-source, solicitation, special notice, task order term-contract).

Much of the effort is done by scraping agency sites and manually done by analysts. Data is taken from everything from PDFs and MS Word documents to MS Excel files and XML. Different agencies provide different levels of data that limits analysis to a restrictive set of data points.

### **How does this user want to provide/access this information? How could the OCDS Help?**

Creating searchable databases of tender notices helps the private sector, particularly SMEs to find appropriate opportunities for which they are eligible to bid or subcontract. A company could use even a simple spreadsheet to filter by location, agency, sector, or good/works/services to be procured. A company would also want email push notifications that enables them to pre-select the types of opportunities (and data) they would receive. RSS feeds, like those used in Russia, can be applied to each tender notice and the feed is updated each time that anything is changed, a document is added, or a tender status is changed.

Published open data with this information could be more easily captured through an API and aggregated.

This user needs a way of determining the relationship between documents. Examples here are tenders to pre-solicitation documents or contract awards and shortlists to tenders. For many publishers, these IDs are being generated from different systems and their workflow doesn't seem to enforce creating that linkage. A company might look at a tender and want to see what other tenders were issued from the same program or as part of the same strategy and perhaps even see who was awarded the contracts.

The key need is uniformity of data format, structure and availability across publishers. This user would like to search for and view contracting records aggregating all available information about a contract.

#### **4. Using Contracting information to Monitor aid, budget execution and service delivery for effectiveness**

##### **Who is this user and what is their objective?**

This user is anyone interested in tracking budget/aid effectiveness. For example, this user could be a journalist, a community based organization, an auditor, or donor.

##### **Which contracting information does this user want?**

This user wants to know who issues the tender, for what purpose, what value, what timeframe; who wins the contract, what conditions are attached, how performance will be evaluated, how funds will be disbursed; whether the contractor is likely to subcontract; who wins subcontracts, the value, purpose, timeframe, of subcontracts.

In the context of aid-funded contracts, this user wants to be able to link contract data to existing project databases (eg through project IDs) and spending databases.

This user wants the following information:

- project status (planning/ identification, implementation, completion, evaluation),
- sector,
- start/end date,
- dates of consultations,
- budget,
- contractor,
- implementing agency,
- donor,
- responsible government department,
- beneficiaries,
- location,
- feasibility study,
- project plans,
- contract,
- bill of quantity,
- annual report,
- evaluation report,
- contract variations, and
- contact information for contract management.

This user wants to use the above information to:

- track costs and delivery.
- know how to report a problem and whether any identified problems have been 'fixed'.
- to know whether there is overlap or significant gaps between donor and budget projects. (This could be accomplished by seeing sector and source of funding coded contracts on maps.)

### **How is this user currently using this information?**

Community based organizations are using the above information in tools like developmentcheck.org to compare plans versus reality on the ground and stakeholder satisfaction. Where problems are identified in contract and delivery, this user tracks the specific problem and whether it's resolved (a fix). The fix-rate, or percentage of identified problems that are resolved is also tracked through DevelopmentCheck.<sup>3</sup> This user might be looking for decisions to repair v. replace, use of cheaper or poorer quality materials than stipulated in the contract, and or design issues with the technical specification of the contract itself.

This user might spend countless hours piecing together contract information related to public spending on aid programs, pulling data off and out of (often poorly structured) procurement websites, or huge PDF, TIFF, and txt files.

Likewise, this user frequently has difficulty accessing information at all (permission issues) and may have to begin from physical records.

### **How would the user like to access this information?**

A particular frustration is the lack of sub-contracting data. At the very least a field that notes whether the prime contractor is likely to sub-contract.

In the context of aid-funded contracts, it is also crucial to be able to link contract data to existing project databases (eg through project IDs) and spending databases.

Hard copies (e.g. at project sites) and online data are welcome. It would be helpful for this user to ensure the data standard has an online and offline strategy, so that those who can't get online can also access and use data, including at the local level (e.g. sign boards).

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<http://www.developmentcheck.org/sites/default/files/attachements/DevelopmentCheck%20Questionnaire%20ENGLISH.pdf>

## Priority Requirements for Version 1.0 of the Open Contracting Data Standard

The above described use cases for open contracting data have now been “translated” into over 150 technical requirements for the Open Contracting Data Standard. However, due to the need to balance between both the demand and the existing capacity of suppliers, we have prioritized these demands into the following key issues (that are relevant to all four of the above described use cases). Beneath each demand, we have identified how the version 1.0 release specification addresses these demands.

1. Provide **unique identification number field**. This unique ID should link tender notices, tender updates and contract awards so that users can easily observe the process of tendering, award and implementation. Currently, it is not always possible to link a tender notice with the corresponding contract award.

**1.0:** The [Open Contracting ID](#) provides a globally unique identifier for a contracting process.

2. Provide a field list of **unique identifiers for procuring entities** (government departments) so that tenders and awards can be easily linked to a procuring entity.

**1.0:** The standard sets out a clear approach for representing [organization identifiers](#) with the flexibility to be applied to government departments. However, many countries lack an authority list of departments, and so approaches to create this are still needed.

3. Provide, for tender notices, a field which lists the proposed budget for a tender. A standard field for “**proposed budget**” will make it possible for users to have a much better idea of how much money is intended to be spent on planned procurements.

**1.0:** The [budget section](#) in planning information allows publishers to declare where funds are coming from, and what funds are allocated to a project.

4. Provide **project identification field**. In Nepal, we worked to link tenders and awards with specific donor-funded projects. We were only able to make this connection for a small percentage of contracts. But donors, civil society and other are keen to understand how development funds are used by government agencies to accomplish distinct development goals. If we can link to particular projects (either donor or budget funded) then the related planning and budget information can be

**1.0:** The [budget section](#) provides space to identify related projects.

5. Provide, in coordination with the corporate registry, a **unique ID -- or registration number -- for each vendor** in the system (including foreign firms). These unique identifiers are often missing from the data. But sound procurement oversight requires good information on which contractors are receiving and implementing contract funds.

**1.0:** The specification sets out a clear approach for representing [organization identifiers](#) drawing on existing registries, and compatible with the IATI Organization Identifier approach.

6. Provide a standardized **taxonomy for goods, works, services** (to facilitate unit price comparisons).

**1.0:** The standard allows [classifications against a number of taxonomies to be provided](#), and recommends a small number of schemes in the initial codelists. This allows publishers to both use their internal taxonomy of goods and services, and move towards parallel use of a shared taxonomy, to which they can map their terms.

7. Capture **basic subcontracting information** including identifier of subcontractor and description of subcontract.

**1.0:** This is not handled with explicit fields in the initial standard, but will be a focus for work after 1.0, based on identifying existing subcontracting data from publishers. However, it is possible to use the related project feature of a budget field to link contracts, pointing from an OCDS release about a subcontract, to its parent contract. For more information, please see the open Github [issue](#).

8. **Capture (links to) documents.** So many of the demands expressed are currently reflected in documentation. Links to these documents and how they fit into the contracting record would be very valuable.

**1.0:** The standard provides space for [documents](#) to be attached at a variety of levels, and provides a detailed document codelist with information on the kinds of documents that should be published.

11. Provide a **standardized location field** (that can accommodate multiple locations) for each tender or award. With standard location information in a unique field, users will be able to see how much contract funding goes to specific locations, adding a great deal of value to the data for all users.

**1.0:** In order to accommodate different location needs, we have proposed to handle this as an extension. A draft extension for linking [location data to line-items is provided in the project GitHub](#) and we will continue to work with publishers and users to identify the best ways to make location information available.

12. Provide a **"bulk download"** of the data by CSV. This way someone using the e-procurement portal can easily download all of the contract data and analyze it. A more advanced option would be to enable an API (application program interface) or web service that would enable programs to be developed to analyze and visualize the data automatically.

**1.0:** The standard documentation provides a [suggested flat format serialization](#) and proposes lightweight mechanisms for discovery of data and APIs.

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