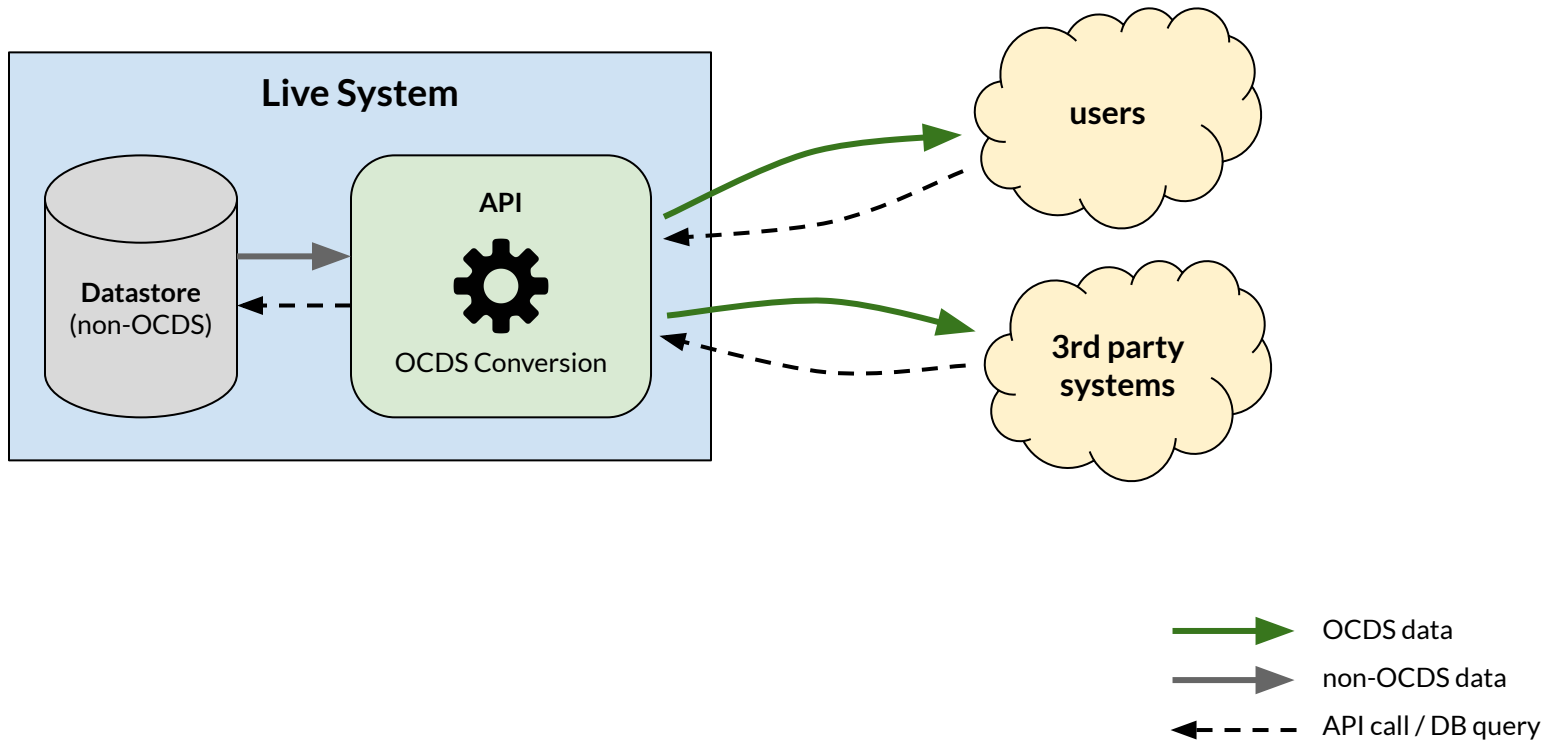


# Technical options for OCDS implementation

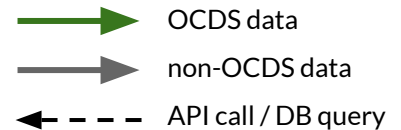
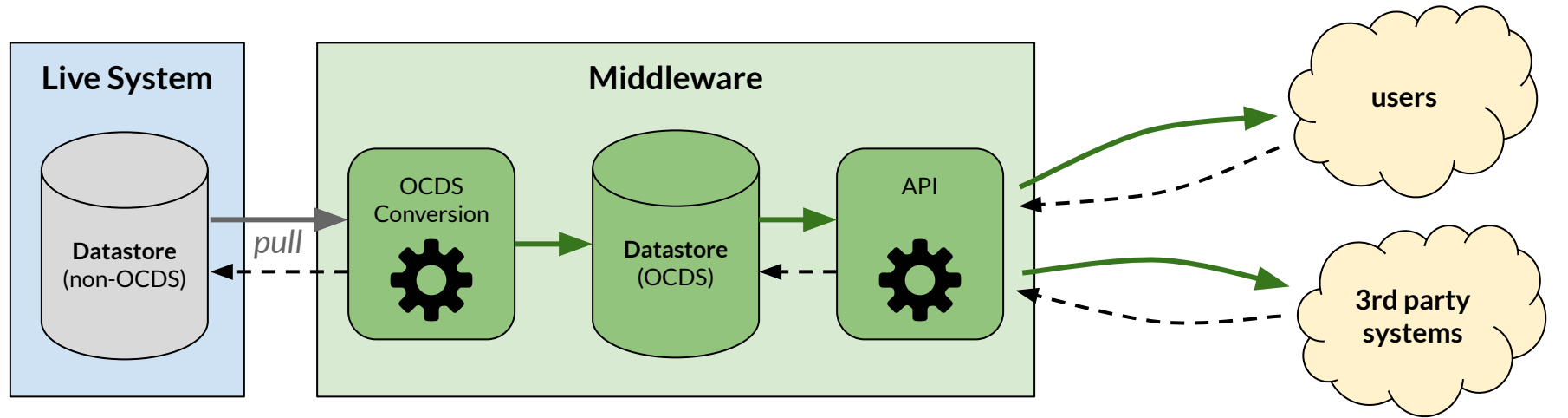
Architecture and publication patterns

Architecture

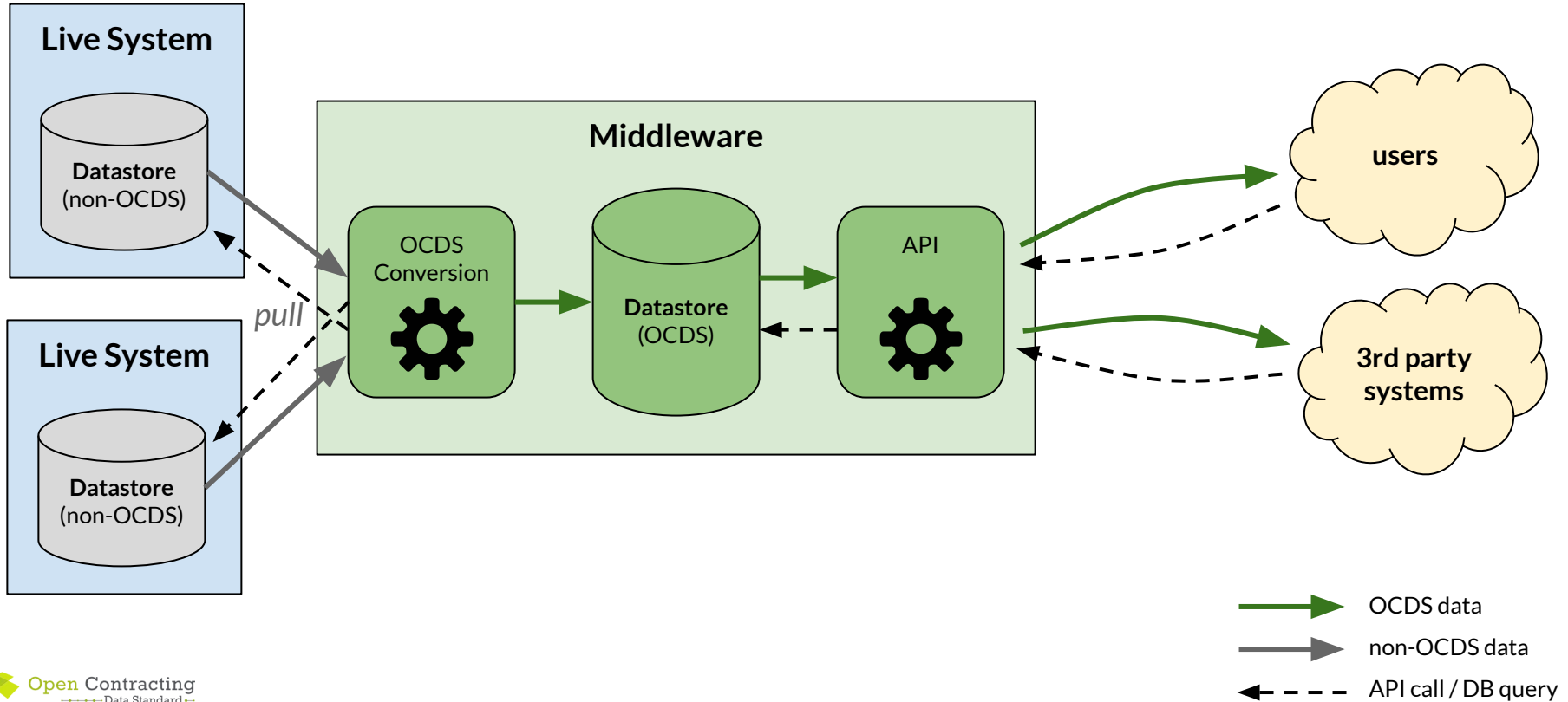
# Direct publication from live systems



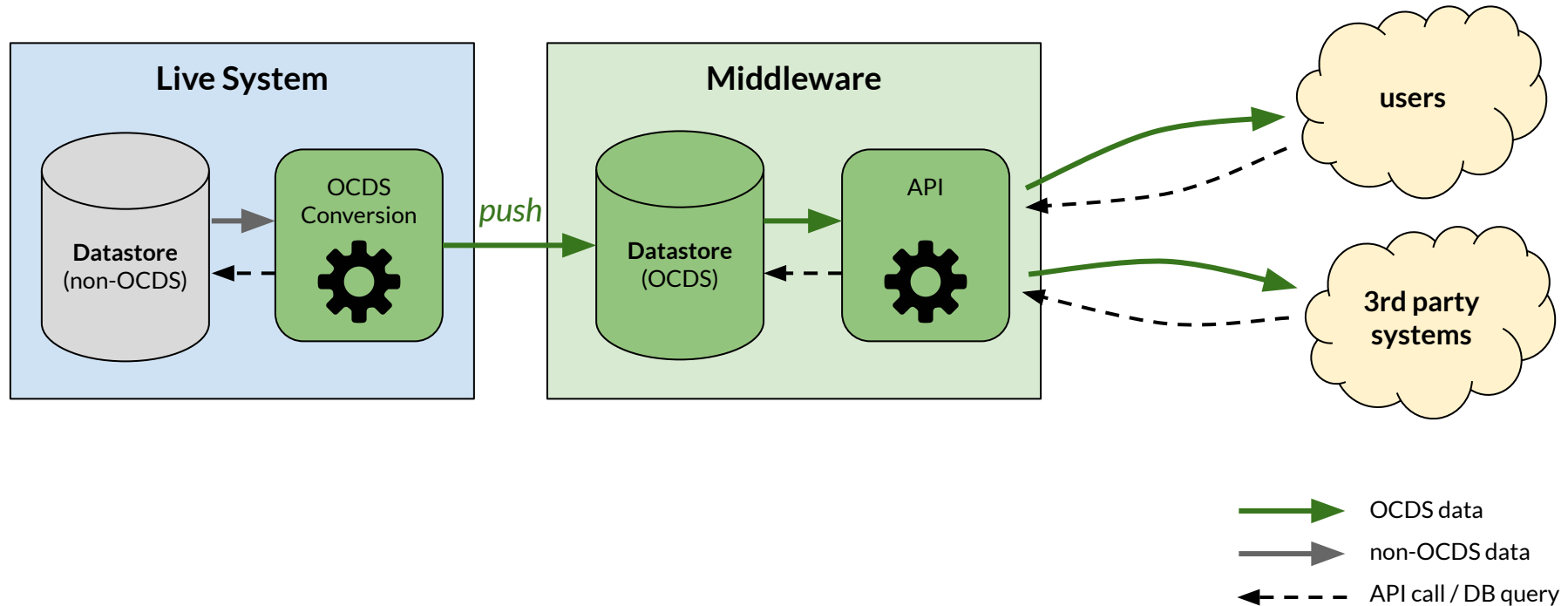
# Separate OCDS datastore - pull and convert



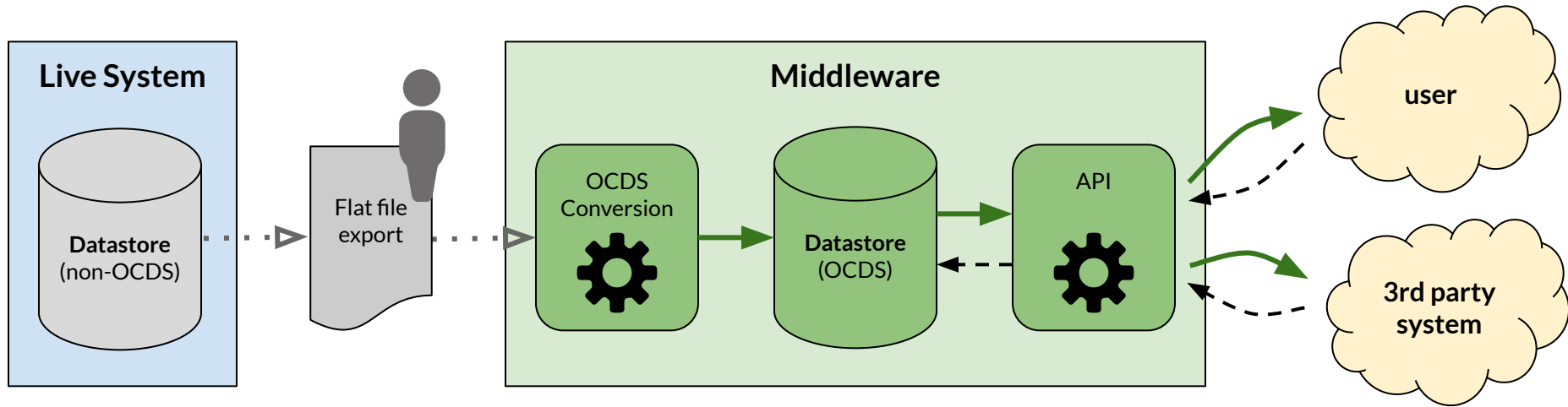
# Separate OCDS datastore - pull and convert



# Separate OCDS datastore - convert and push



# Separate OCDS datastore - manual import

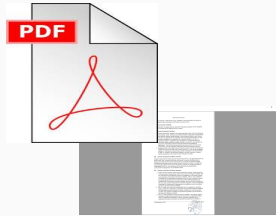


# Publication patterns



# Documents and data

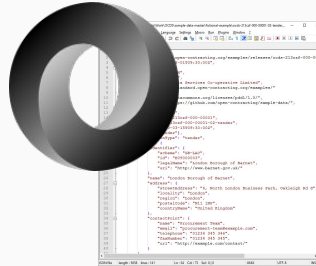
## Documents



Direct URLs

Long-term archival

## JSON

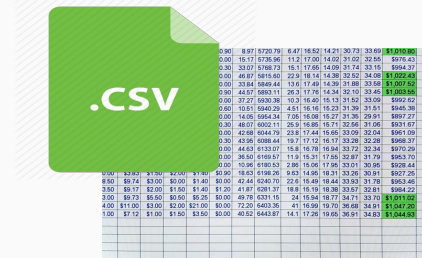


Individual releases

API

Bulk downloads

## CSV / Excel



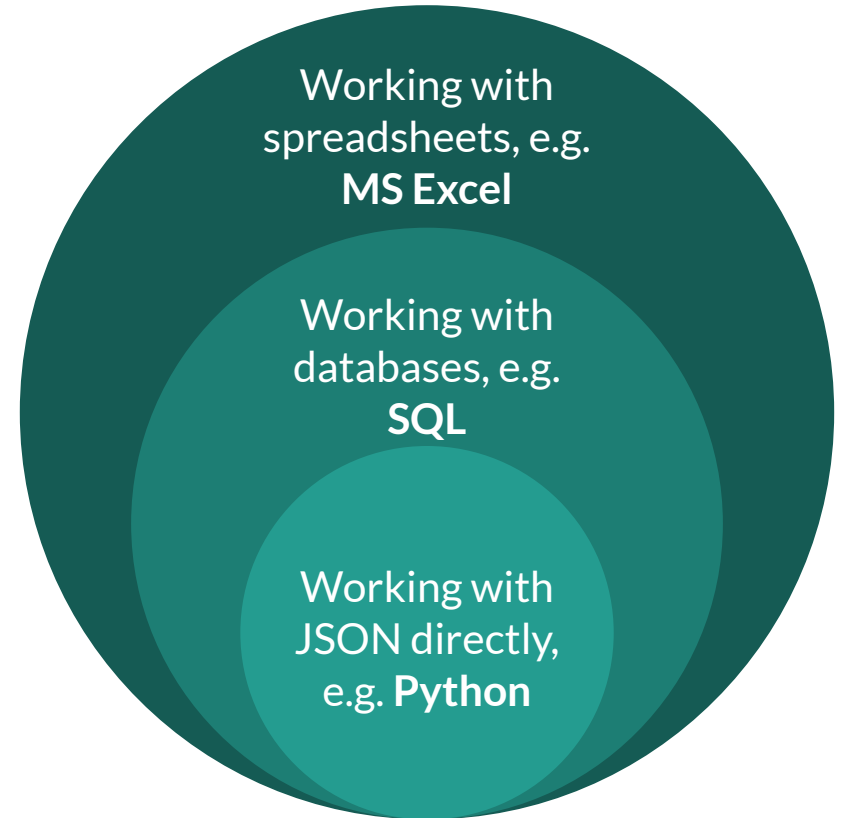
Bulk download

Segmented data:  
month, year,  
department etc.

# Skills and user needs

It's important to provide data in structured JSON format for tool developers and advanced users.

**But more users have the skills to work with flattened (tabular) data, so providing CSVs and spreadsheets is important too.**




# Serialization

## Structured (JSON)

```
"milestones": [  
  {  
    "id": "1.0",  
    "type": "preProcurement",  
    "title": "Public consultation",  
    "description": "A public consultation will be held at the offices of the Ministry of Communications on 1st December 2015.",  
    "status": "scheduled",  
    "dueDate": "2015-12-01T00:00:00-06:00"  
  },  
  {  
    "id": "2.0",  
    "type": "approval",  
    "title": "Strategic outline case approval",  
    "description": "Ministry of Finance approved the strategic outline business case for the project",  
    "status": "met",  
    "dueDate": "2015-01-01T00:00:00-06:00",  
    "dateMet": "2015-01-01T00:00:00-06:00",  
    "dateModified": "2015-01-01T00:00:00-06:00",  
    "documents": [  
      {  
        "id": "1",  
        "type": "document",  
        "title": "Strategic outline case approval",  
        "description": "Strategic outline case approval",  
        "status": "approved",  
        "dueDate": "2015-01-01T00:00:00-06:00",  
        "dateMet": "2015-01-01T00:00:00-06:00",  
        "dateModified": "2015-01-01T00:00:00-06:00",  
        "documents": [  
          {  
            "id": "1",  
            "type": "document",  
            "title": "Strategic outline case approval",  
            "description": "Strategic outline case approval",  
            "status": "approved",  
            "dueDate": "2015-01-01T00:00:00-06:00",  
            "dateMet": "2015-01-01T00:00:00-06:00",  
            "dateModified": "2015-01-01T00:00:00-06:00",  
            "documents": [  
              {  
                "id": "1",  
                "type": "document",  
                "title": "Strategic outline case approval",  
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                "status": "approved",  
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                "dateMet": "2015-01-01T00:00:00-06:00",  
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                    "description": "Strategic outline case approval",  
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                    "dateModified": "2015-01-01T00:00:00-06:00",  
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                        "type": "document",  
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                        "documents": [  
                          {  
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                            "dateModified": "2015-01-01T00:00:00-06:00",  
                            "documents": [  
                            ]  
                          }  
                        ]  
                      }  
                    ]  
                  }  
                ]  
              }  
            ]  
          }  
        ]  
      }  
    ]  
  }  
]
```

## Flattened (CSV/Excel)



	A	B	C	D	E	F
5	ocid	id	planning/milestones/0/id	planning/milestones/0/type	planning/milestones/0/code	planning/milestones/0/title
6	ocds-213czf-example-ppp	1.2.1		1 preProcurement		Public consultation
7	ocds-213czf-example-ppp	1.2.1		2 approval		Strategic outline case approval
8						
9						

# Spreadsheets

Simple data can be presented in a single sheet

ocid	id	tender/id	tender/value/amount	contracts/0/id	contracts/0/value/amount

Complex data can be presented in a multiple sheets

ocid	id	tender/id	tender/value/amount

ocid	id	contracts/0/id	contracts/0/value/amount

# Static files

Individual files are important for **developers and tools**:

- Persistent URIs for individual releases and records

Bulk files make your data **accessible** to a wider range of users.

Consider:

- Periodic generation and segmentation, by date, release ID etc.
- Dynamic generation: streaming the latest database contents

# APIs

- Individual releases and records at **stable URLs**
- All releases and records **ordered by date**
- **Search endpoints**
- **Aggregation**
- Don't forget **documents**



informed by user needs

Change history

# Change history: releases and records

## Releases:

Updates on individual events in a process, e.g:

- Tender notice
- Contract award
  - Contract amendment



## Records:

Current state of the **whole process.**

+

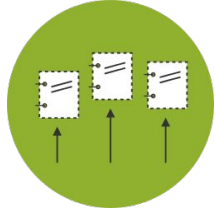
Links to individual releases



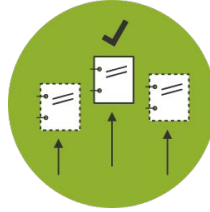
# releases and records

We recommend publishing a **new release** of data whenever anything changes in the contracting process.

## Worked example



**15th Jan**  
Tender issued



**28th Feb**  
Award announced



**15th March**  
Contract signed



- Option 1:** Publish **backward looking** data after contract is signed;
- Option 2:** Publish a single **record**, updating every time things change;
- Option 3:** Publish **individual releases** as each event happens, along with an OCDS record to compile a snapshot of the whole process.