

Open Source goodies at Windsor & Maidenhead

...

FOSS4G-UK June 2016

Overview

Windsor and Maidenhead in late 2012 started its Open-Source journey.

Open-Source...

- is now common vocabulary at the council.
- has empowered the council to grow GIS.
- is now at the heart of all GIS development work.

We are now starting to look towards Open-Data, as a provider and user of.

Here are some of our Open-Source goodies.....

Discussion points

Technologies

- QGIS
- Postgres/postgis
- PHP
- Talend
- Notepad ++
- Leaflet
- Mapserver
- Python
- Bootstrap & Typeahead

How we're using it

- Json / Geojson
- Data integration
- Data extraction
- Self Service

Where next

- Open Data portal
- Metadata portal
- APIs (auth)
- Carry on coding!

QGIS: the saviour

QGIS

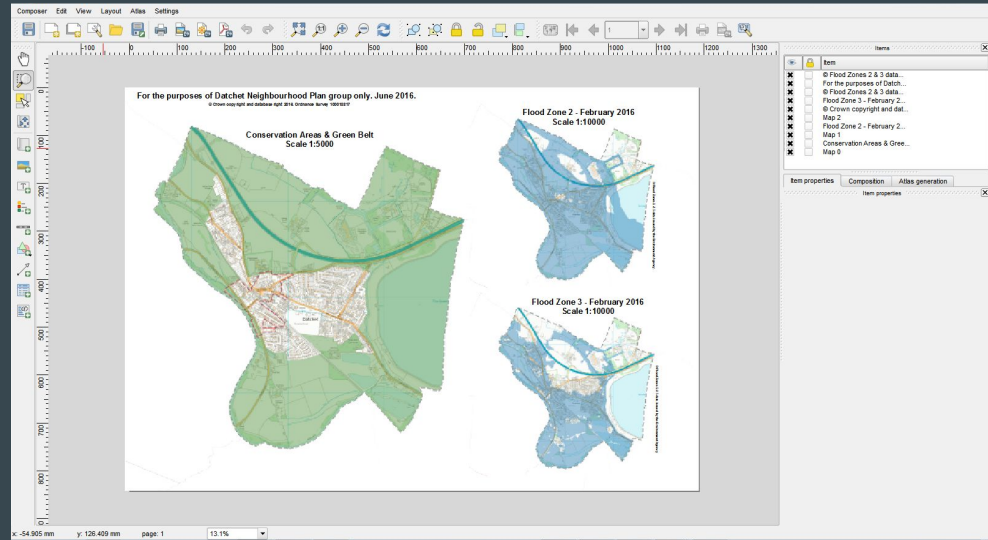
We do nothing fancy with it!

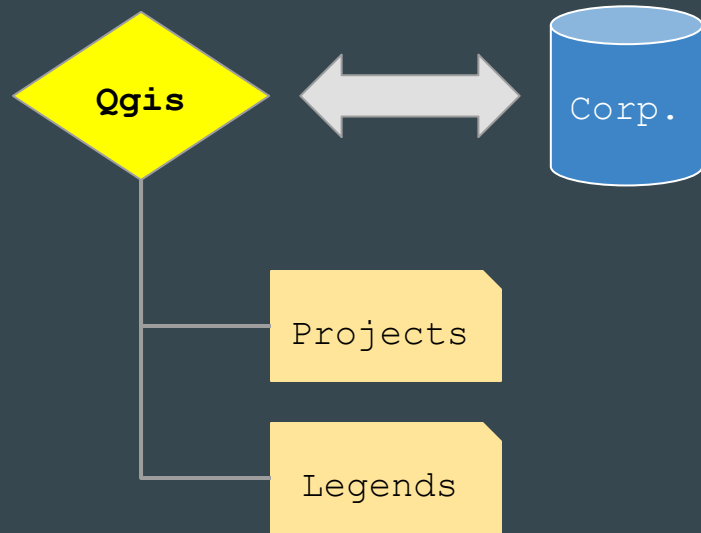
Leave plugins to plugin devs.

Capture, edit, share, print.

Savings of £100'000+

We're Bronze Sponsors of QGIS





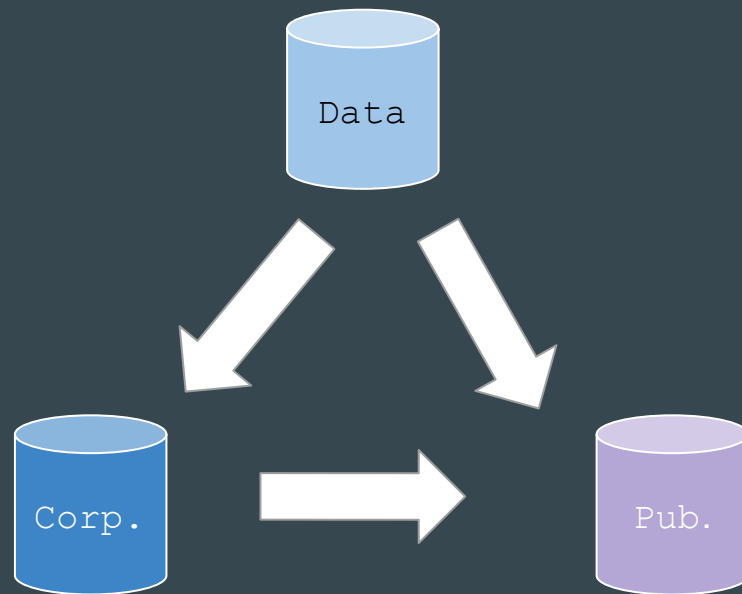
postgres/postgis: the data king

Postgres / PostGIS

Lots of data - perhaps too much!

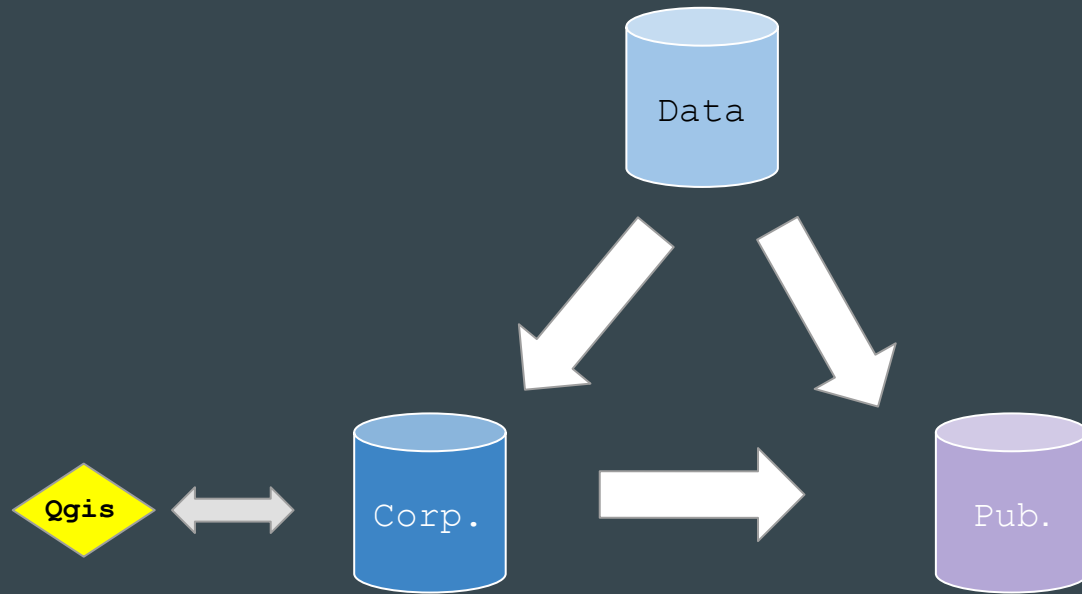
Metadata - key fields

Schema's aggregated into themes



METADATA..

```
owner text DEFAULT 'Sarah Ball'::text,  
department text DEFAULT 'Planning Policy'::text,  
lab_x numeric(10,0),  
lab_y numeric(10,0),  
lab_rot numeric(10,0),  
x_centre numeric(6,0),  
y_centre numeric(6,0),  
notes character varying(254) DEFAULT 'Shows the locations of RWBM conservation area'::character varying,  
status_of_data character varying(254) DEFAULT 'up-to-date'::character varying,  
inspire_la character varying(100) DEFAULT 'Royal Borough of Windsor and Maidenhead'::character varying,  
inspire_region character varying(100) DEFAULT 'South East England'::character varying,  
inspire_country character varying(50) DEFAULT 'United Kingdom'::character varying,  
layer_name character varying DEFAULT 'Conservation Areas'::character varying,  
created date DEFAULT now(),  
modified date DEFAULT now(),
```



Talend: rather neat!

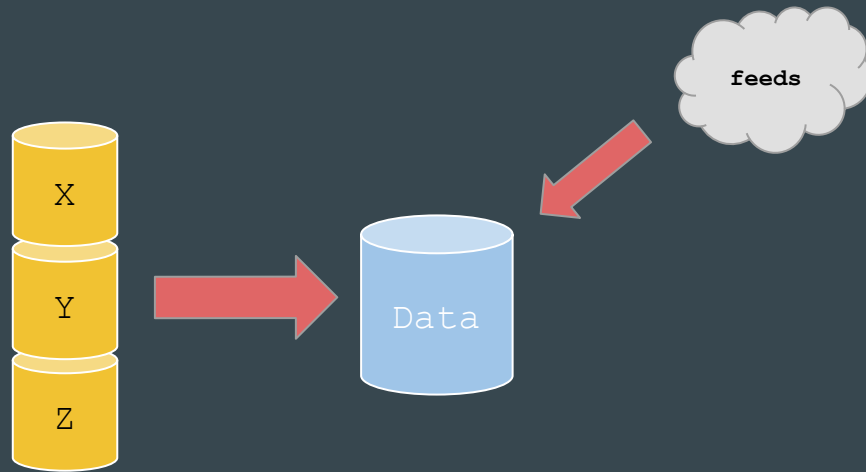
Talend

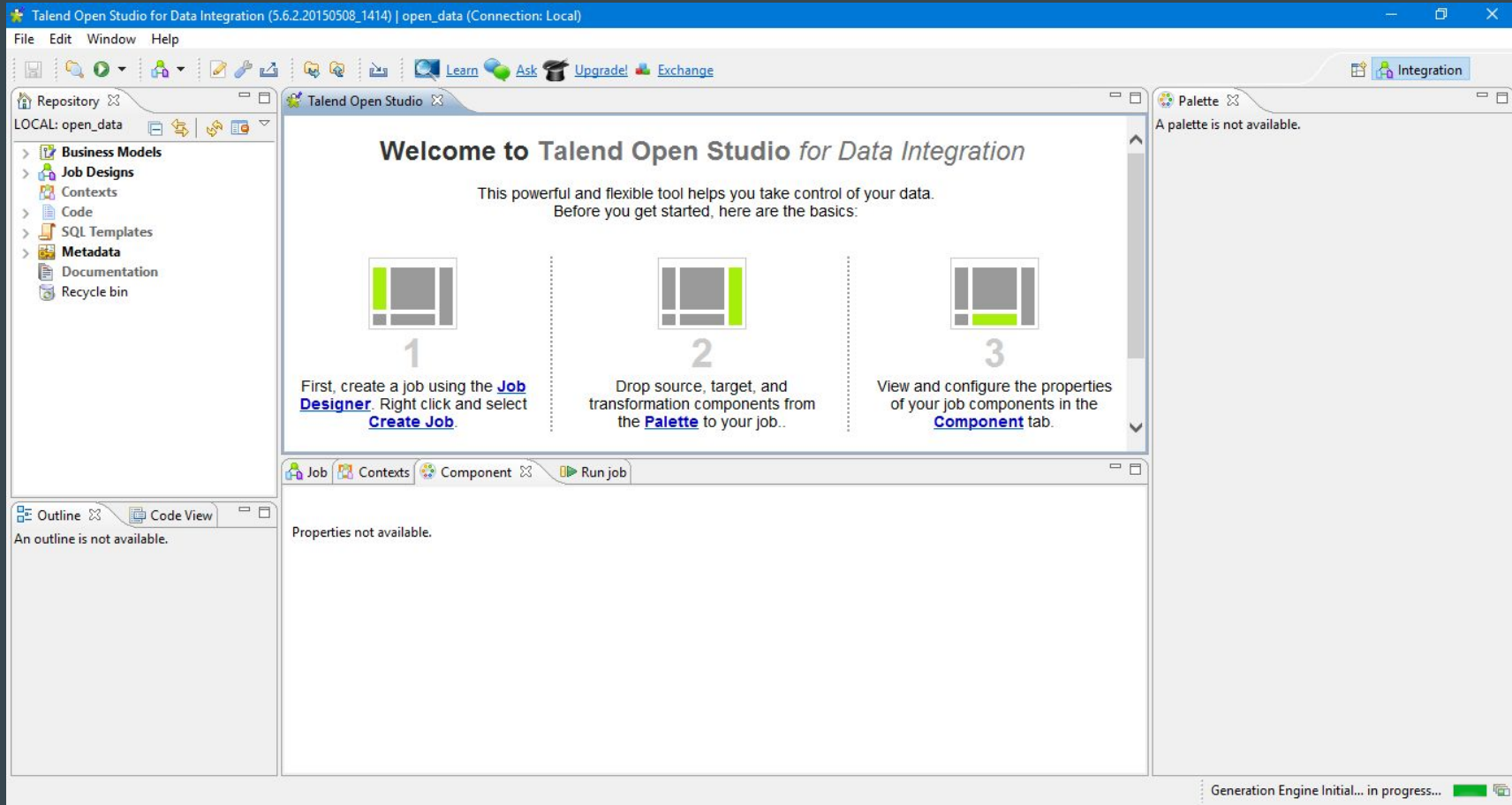
ETL, extract, transform & load

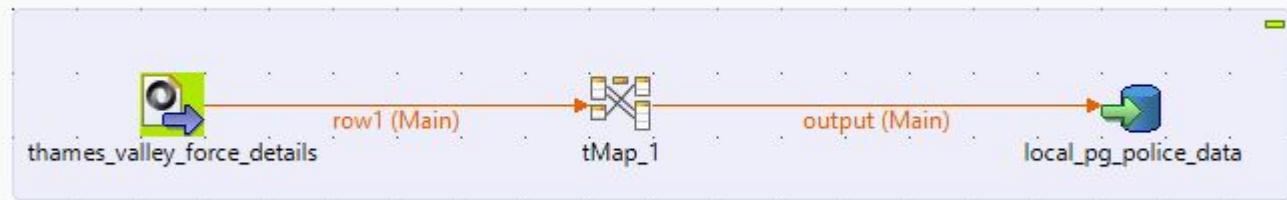
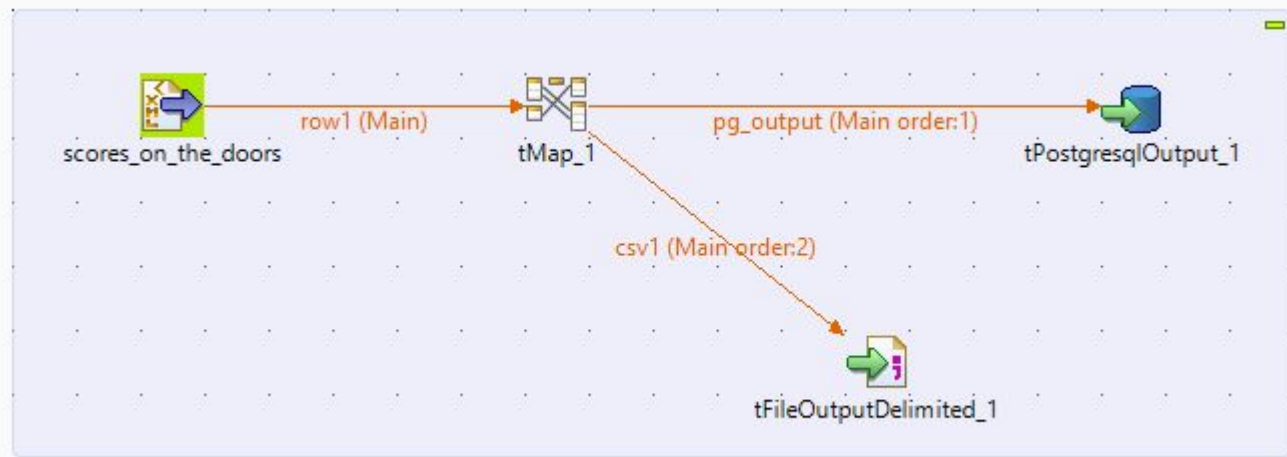
Akin to FME. On prem or cloud.

Overview:

- Not really designed for spatial
- Great for connecting to virtually any data source/type.
- GUI driven
- Export job, then scheduled task it.







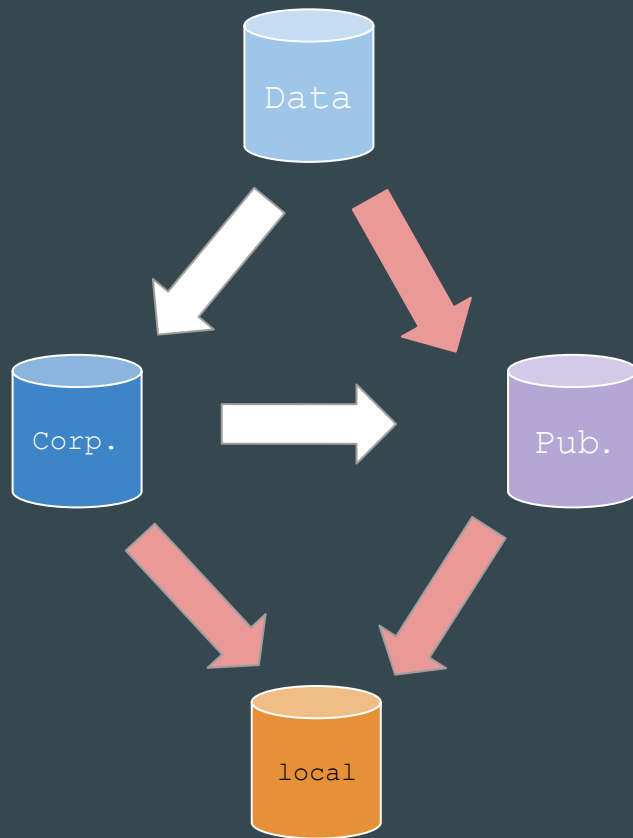
pgsql: love it!

pgsql

Our new tool!

In some ways replacing what we are doing with Talend.

- Used to replicate Corp. Data. Pub. to local machine
- Used for database backups



example

```
@echo off
setlocal
set PGPASSWORD=PASSWORD
:: Does the restore -----WORKING
"C:\Program Files\PostgreSQL\9.3\bin\psql.exe" -h SERVER -U USER DATABASE D:\weekly_list.sql
echo Weekly list restored on KYN
```

PHP: my new best friend

PHP

XAMPP

Overview:

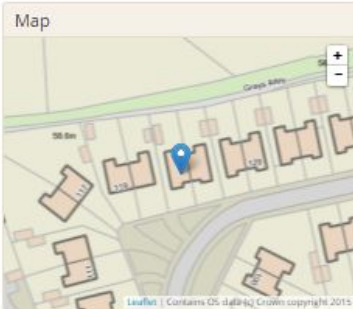
- Json & GeoJson outputs
- EA Flooding API integration
- Switches :: alias
- Integration with Veolia & Amey APIs

Know Your Neighbourhood



[Home](#) / [Know Your Neighbourhood](#) / [Neighbourhood View](#)


Map




This Property



123 Farm Road Maidenhead SL6 5JQ
Lat: 51.5252330794084, Lon: -0.761396990266533

 Council Tax: **Band E**
[View Bandings](#)

 Rubbish Collection:
Bin Day: **Friday**

[Go to content](#) 

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[Schools Information](#)

Council & Democracy



Ward



Pinkneys Green

Councillors:

- Charles Hollingsworth**
- Marius Gilmore**
- Simon Werner**

Parish



This is an unparished area of the Borough.

Chair:

Clerk:

Email:

Parliament



Your member of parliament:

Theresa May MP - Conservative

```
$floodAreaID = (flood area id)
```

```
$url_floodarea = "http://environment.data.gov.  
uk/flood-monitoring/id/floodAreas/$floodAreaID";
```

```
$content = file_get_contents($url_floodarea);
```

```
$json = json_decode($content, true);
```

Flooding Information



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Flood warning areas

Maidenhead

Covering North Town, Fishery, Bray and Maidenhead town centre

Cookham

Covering Cookham and Cookham Rise

Hurley and Bisham

Windsor and Eton

Covering Windsor (Cleeve, Datchet, Town Centre), Eton and Eton-Wick

Datchet and Wraysbury

Covering Datchet, Wraysbury, Hurton and Hythe End

Old Windsor

SAMPLE DATA

Sample - Covering somewhere and somewhere-else

3 day forecast

National 3 day forecast - 2018-05-28



National 3 day forecast - 2018-05-30



National 3 day forecast - 2018-05-31

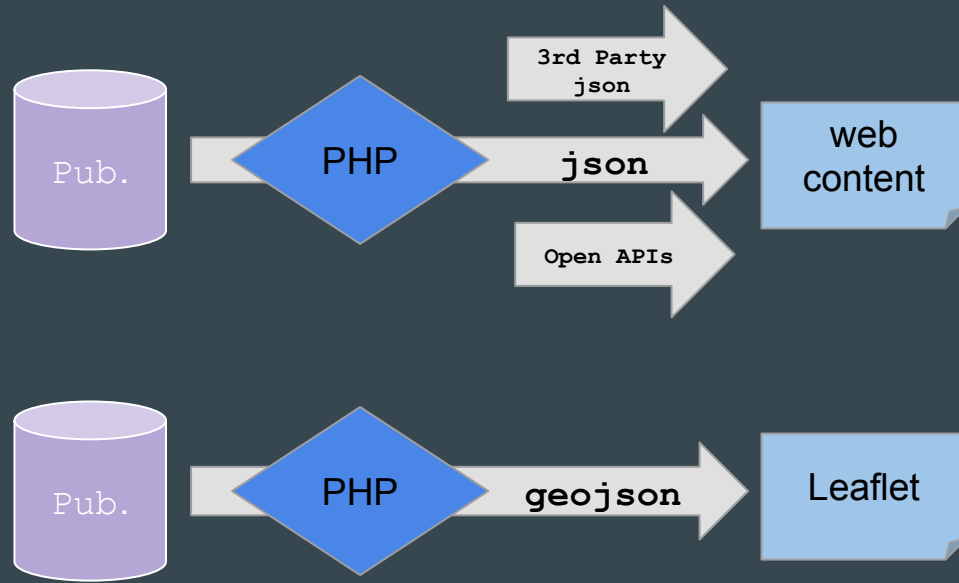


Monitoring Stations



Station References:
Location:
Latest data recorded at:
Current Flood risk (metres per second):
Current Level (metres):

Leaflet | Map data © 2011 OpenStreetMap contributors, Imagery © 2011



Leaflet js: whop whop

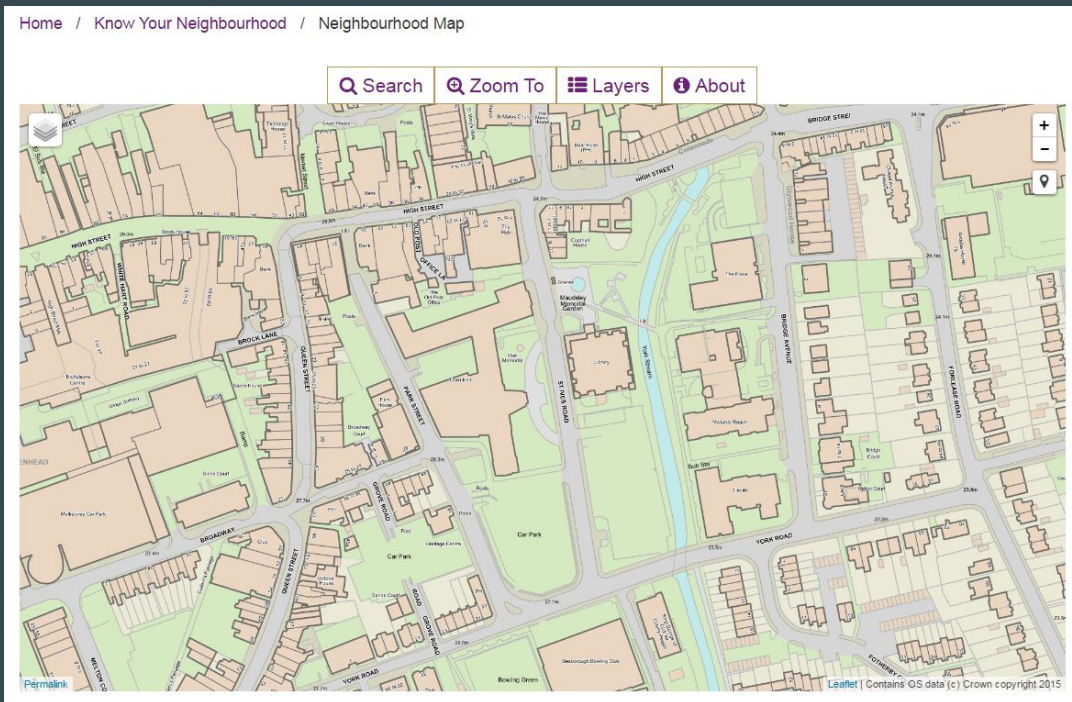
Leaflet JS

Simple to use

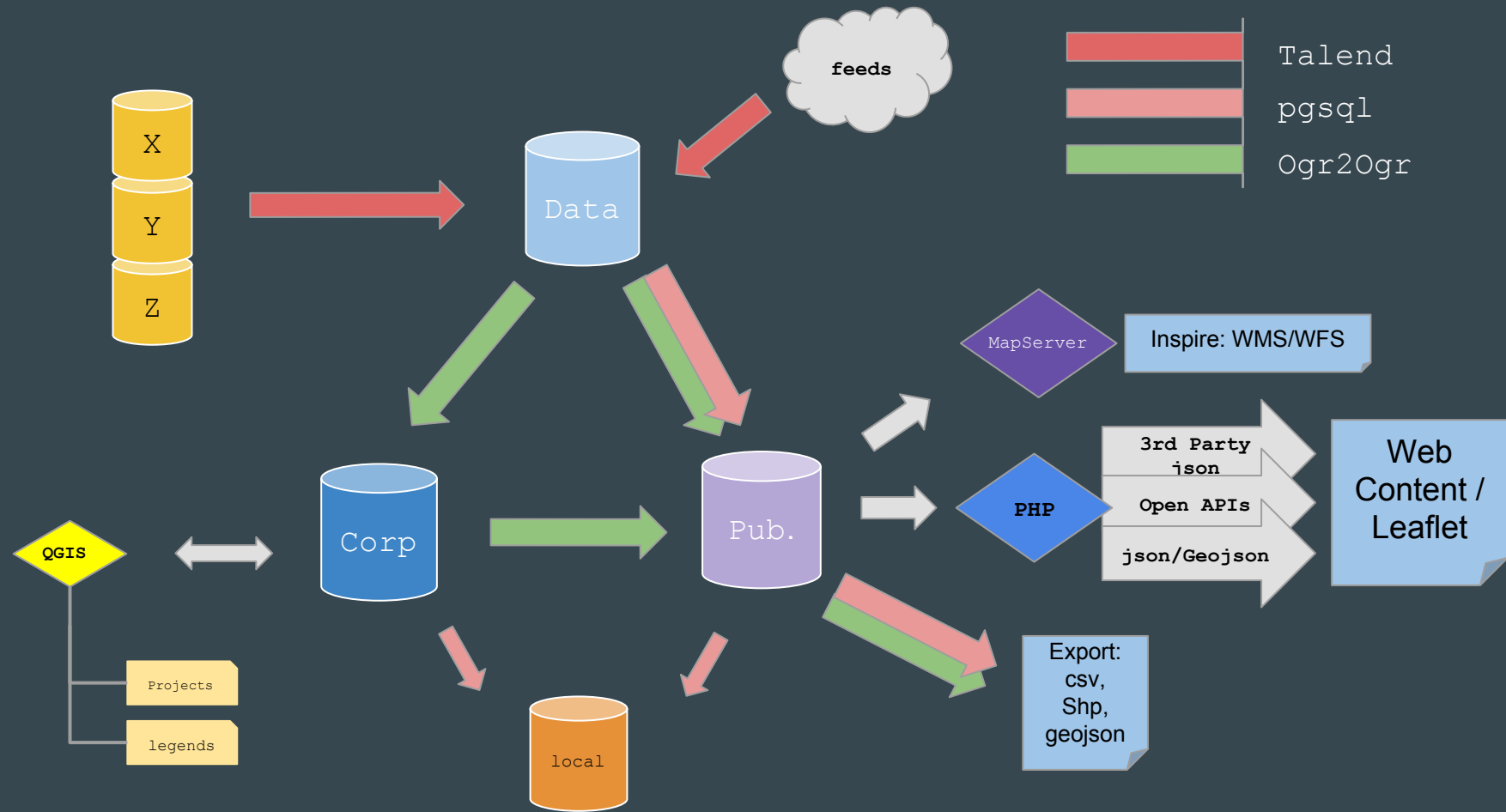
Creates nice maps

Reusable code

Plugins to extend it



Altogether: simples!



Paid for services

Hosted mapping

- Nautoguide

AWS - Postgres RDS ?

- LSG / address base searches

Pause !

We do a lot with open-source.

We could do more?

Where next?

Open Data portal

- July/August time.
- Release Open/Closed APIs (later on this year)

Metadata Portal

- Internal search on data, currency and ownership.

Profiles...

- Ward/Borough profiles to visualise data.

Find a new challenge!

- Open to offers!

Fin

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