



URBAN-GEO BIG DATA

PRIN PROJECT: *URBAN GEOmatics for Bulk Information Generation, Data Assessment and Technology Awareness*

Workshop on Volunteered
Geographic Information
CNR, 16/04/2018

PSAB An open source Participatory Sensing App Builder

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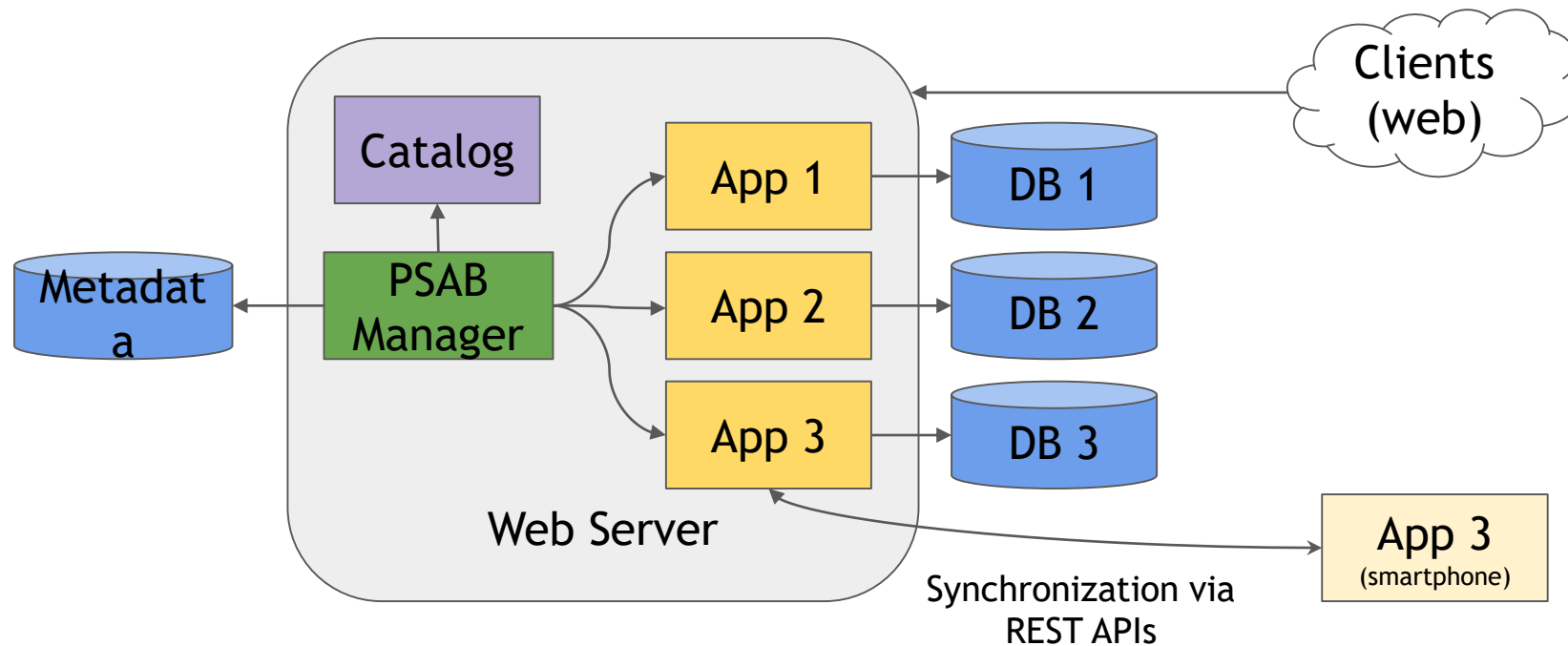
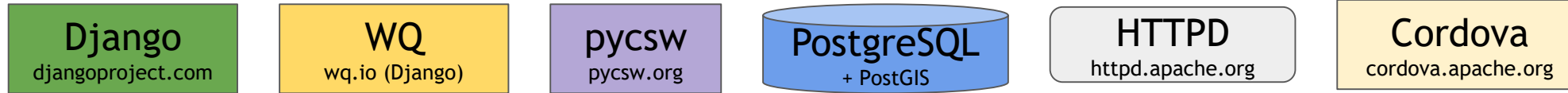


Motivations

Provide a tool in order to create customized applications for data collections, which the following characteristics:

- ▶ Easy to use
 - ▶ No special skills required, only a web browser is needed
- ▶ Open Source
- ▶ Multi-platform
 - ▶ Web
 - ▶ Android
 - ▶ iOS (work in progress)
- ▶ No data-silos
 - ▶ Metadata are published taking advantage of existing standards

Architecture & Software stack



XLSform

“XLSForm is a form standard created to help simplify the authoring of forms in Excel. Authoring is done in a human readable format using a familiar tool that almost everyone knows - Excel.” -- <http://xlsform.org/>

- ▶ How to create an XLSForm?
- ▶ Web tools (easy to use, but limited)
- ▶ Manual editing (useful to extend simple forms)



How it works

PSAB [Home](#) [Create application](#) [Logout](#) [Admin](#)

Home

Projects

Application	Description	Tags	Creator	Creation	Downloads	Actions
Bike parking	Bike parking survey	bike parking	fracra	March 20, 2018	<ul style="list-style-type: none">GeoJSONMetadataAndroid	Manage
Cestini Milano	Rilevamento cestini	cestini milano	gino	March 20, 2018	<ul style="list-style-type: none">GeoJSONMetadataAndroid	
Landcover	Validating landcover maps	landcover	maria	March 20, 2018	<ul style="list-style-type: none">GeoJSONMetadataAndroid	

Services

- CSW endpoint: psab.localhost/csw ([GetCapabilities](#))



Create a new application

PSAB [Home](#) [Create application](#) [Logout](#) [Admin](#)

Create a new application

Fill the form

Title

Coverage

Description

Tags

A comma-separated list of tags.

Upload

[Create \(and wait\)](#)



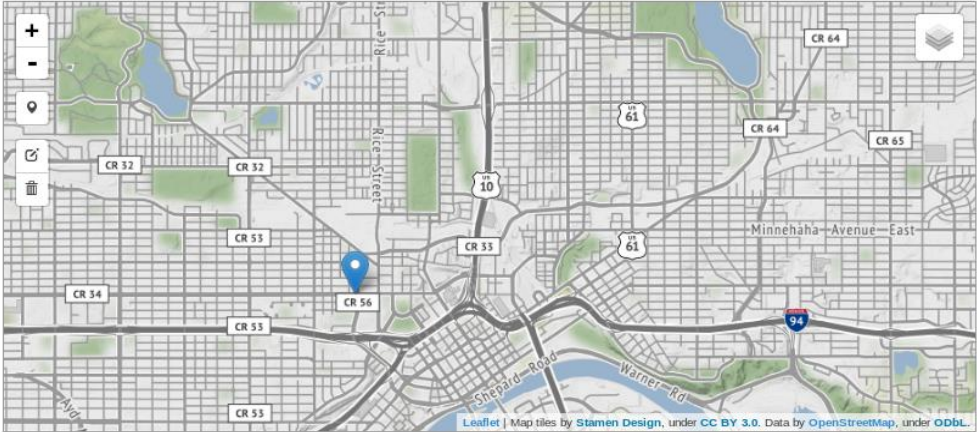
PSAB app (example) - Add new data

Notes:

- ▶ Position can be manually set moving the pinpoint for better accuracy
- ▶ Data are stored locally and synchronized when an internet connection is available

Home Add landcover point

Position



Your current position

Amenity **Forest** **Artificial surface**

Classification

No Image Picture No file selected.
Take a picture

Description

Additional information



Metadata

Dublin Core Metadata Element Set 1.1 -

<http://dublincore.org/documents/dces/>

Provided by the user	Computed automatically	PSAB defaults
title, subject, description, coverage	creator, identifier, date	contributor, publisher, type, format, language, rights

Notes:

- ▶ identifier: URI to the resource (GeoJSON file)
- ▶ subject: list of tags/keywords
- ▶ rights: link to ODbL v1.0



Known issues and future improvements

- ▶ PyCSW incompatibilities with Python 3
- ▶ iOS support is on the way
 - ▶ Can be provided using Phonegap + iOS key
- ▶ Icons for multiple choices are not supported currently
- ▶ Better overall consistency, theming and customization





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Thank You!

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