TerriSTORY

a sustainable energy observatory becoming a mutualized nation-wide platform

Sylvain Beorchia, FOSS4G 2021

infos@oslandia.com

What is TerriSTORY ?

A web platform

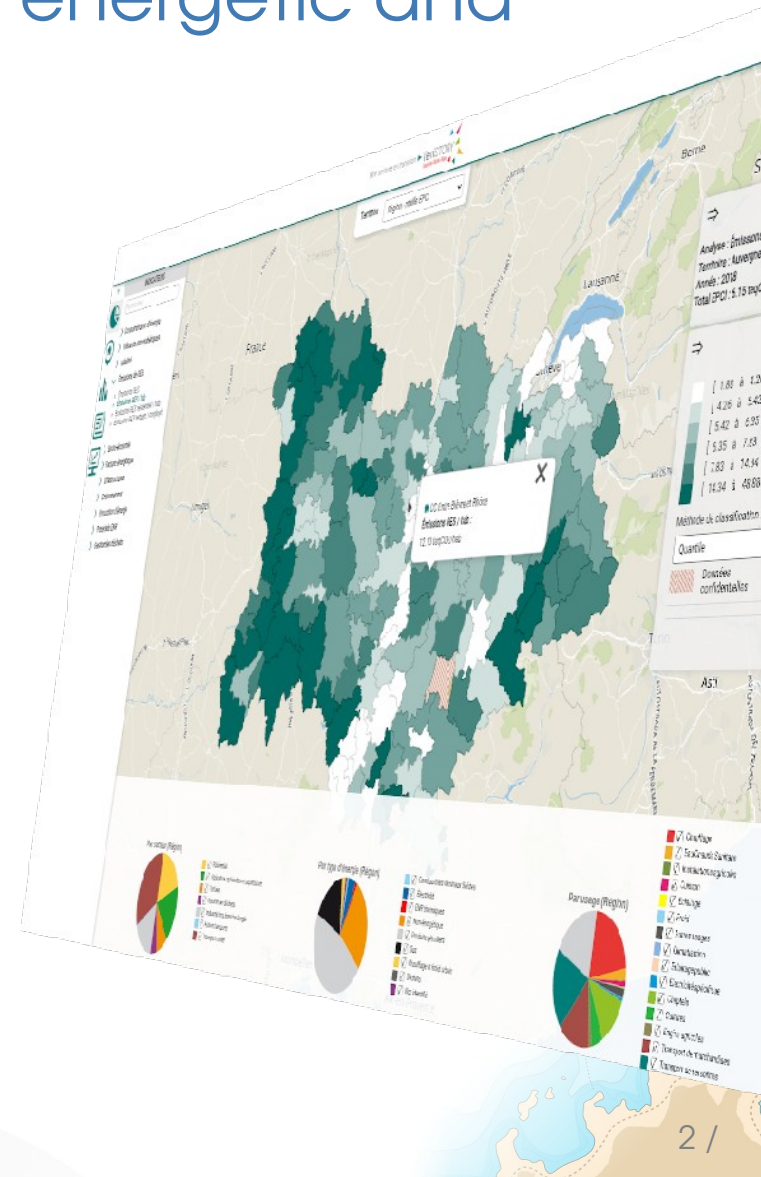## An online tool to track and direct the energetic and ecological transition of territories

decision-makers

territory planners

Soon, an OpenSource software

Public website (www.terristory.fr)

Code will be release soon

FOSS4G
BUENOS AIRES 2021

OSLANDIA

Energy ?

Our society has been developped around energy

We need energy

Energy data is Geographic

What to do ?

    observe

    study

    localise

    manage

    plan

The people involved

AURA-Energie Environnement

french association

(Pierrick, Paul, Yolande, Fatima, Marianne...)

Auvergne-Rhône-Alpes (France)

Promote sustainable energy

Oslandia

Me, my colleagues

(Sylvain, Damien, Ludovic, Vincent)

OpenSource GIS company

Evolution of the project...

The website

A demo project at first: simple data viewer

Now a complete platform for data observation
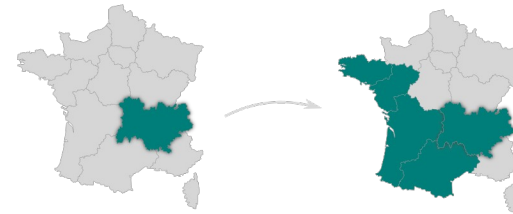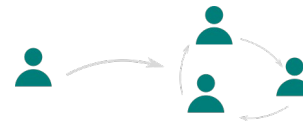
dynamics maps / charts

simulations / scenarios

impact on local employment

Actors

Single actor at first, one region

Now a consortium (many peoples)to support the platform and deploy it (multiple regions)

Today : National project, a reference platform

Coherent with OS projects

a simple project to a full platform

a single developer from a single company to multiple developers from various origins

a single funder to multiple funders organized as a consortium

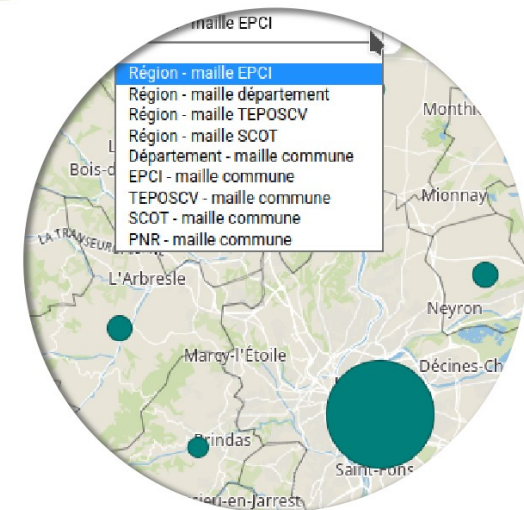a single actor for roadmap definition to a mutualized roadmap
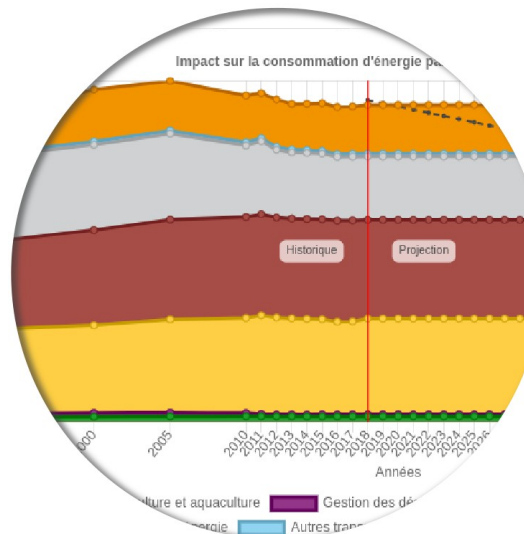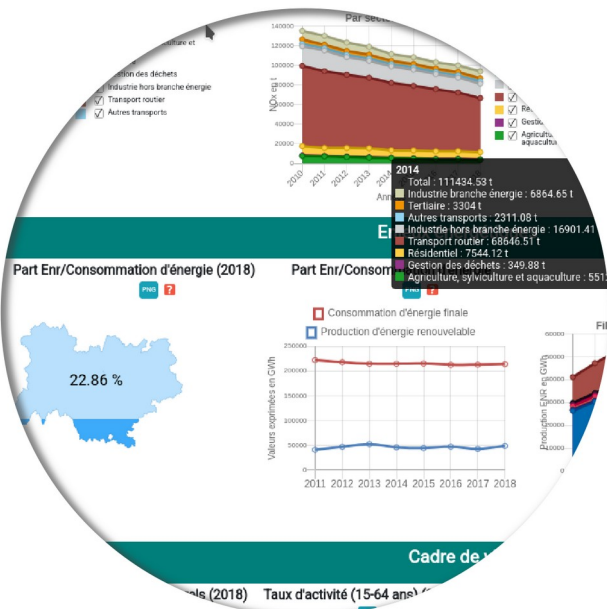
What can I do ?

Run simple analysis

   map, charts

Filter

Build dashboards

Build predictive data charts

Architecture overview

openmaptiles

osm_build.sh

OSM
POSTGRESQL

Postile
(Vector tile Server)

/osm/z/x/y.pbf

NGINX

tilecache

scripts SQL

import

TerriStory
POSTGRESQL

Postile

/geo/z/x/y.pbf?layer=communes

Python / Sanic

/api

UI (OL/React)

AURA-EE + Partenaires
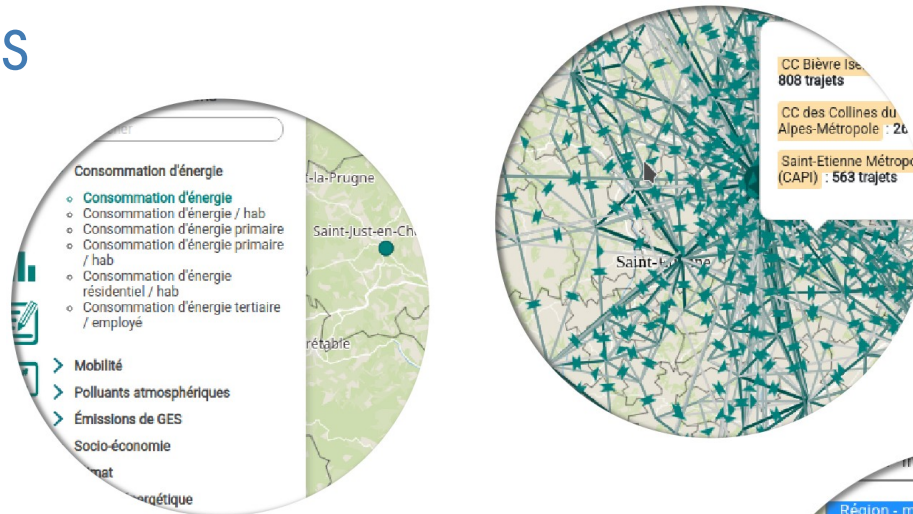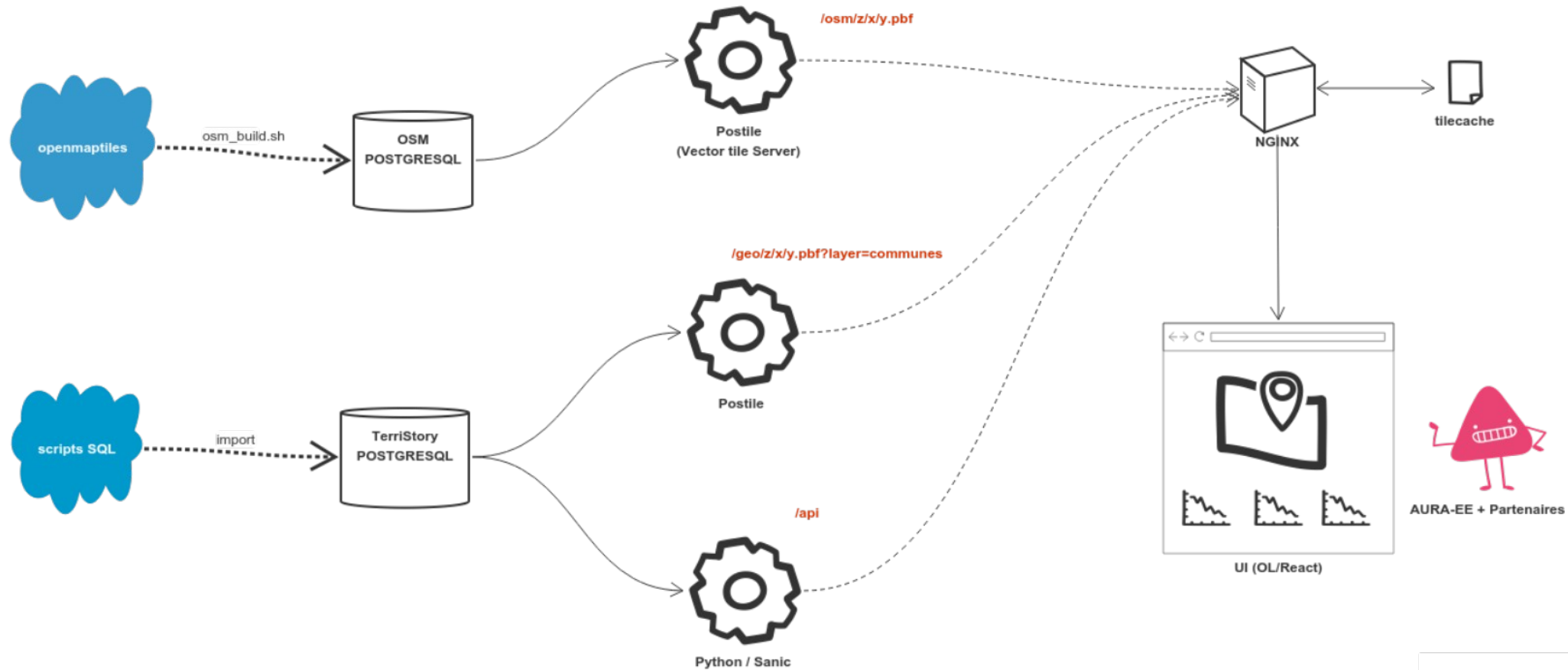
Single page app

Simple UI

very light, very intuitive

ReactJS

main framework of the app

OpenLayers

rendering of the maps

ChartSJ

charts, pies, donuts...

Front side

API build with Python

Sanic, Asyncpg, Alembic, Pandas, Pytest...for the most importants
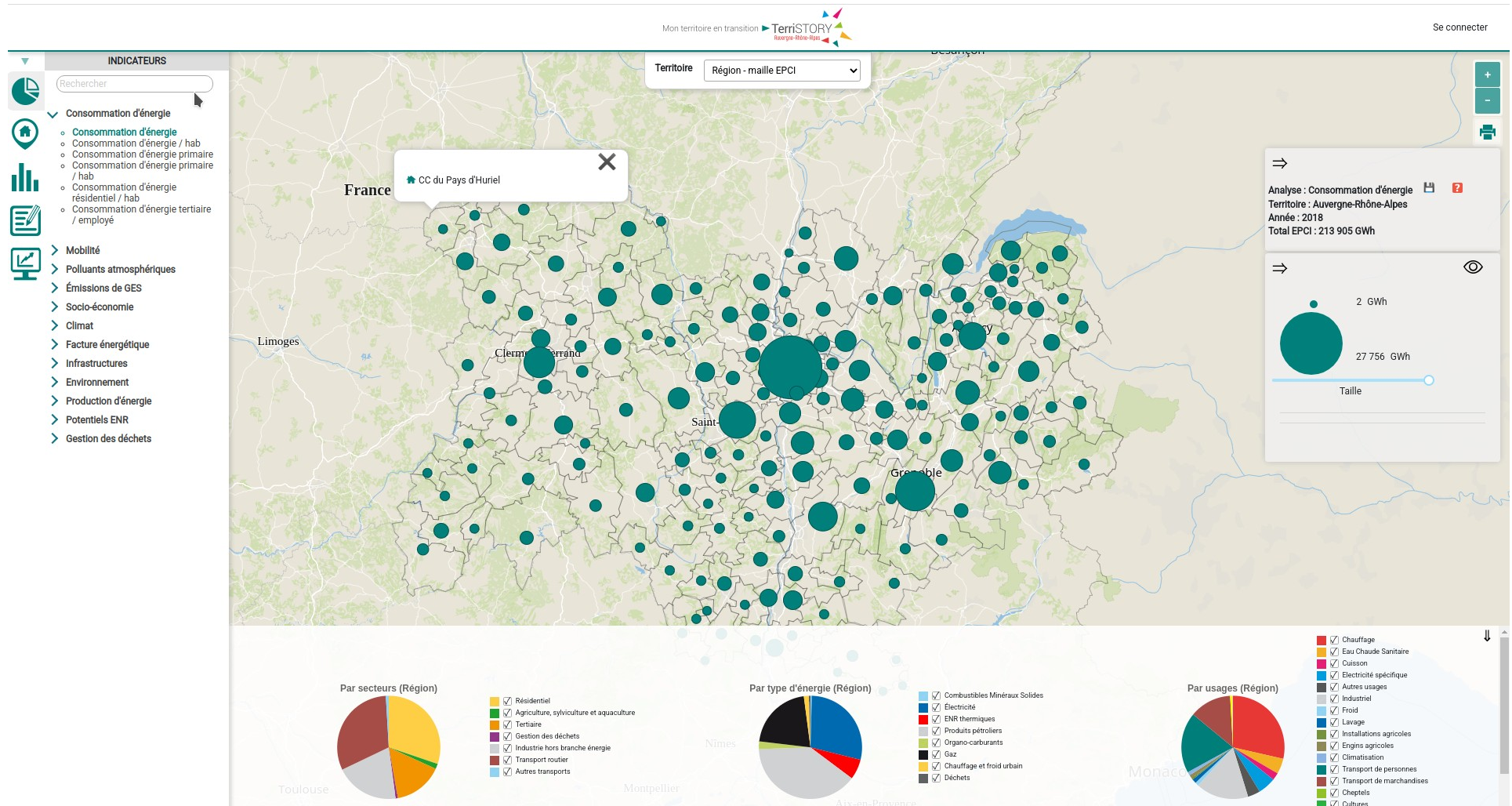
Home made api exposing all the routes to serve data to the front

```python
📄 __init__.py   1,01 ko

1    import configparser
2    import os
3    import sys
4    from pathlib import Path
5
6    __version__ = '1.6.0'
7
8    here = Path(__file__).parent
9
10   settings = configparser.ConfigParser(allow_no_value=True)
11   here = Path(__file__).parent
12   # read first in user home directory if exists
13   home = Path.home() / '.terriapi.ini'
14
15   if 'TERRIAPI_SETTINGS' in os.environ:
16       filename = Path(os.environ['TERRIAPI_SETTINGS'])
17       if not filename.is_file():
```

Data managment

Storage with Postgres/ Postgis

Dynamic loading via the front from connected users

Data exchanges

JSON / GeoJSON is the main format chosen for data processing between back and front

Front and back are disconnected, and not inter-dependant.

  Tomorrow, if we want to switch OpenLayers for Leaflet, QWC2 or Giro3D, we could do it easily.

  The same for the back

Application is generic

Backgrounds & layers

Vector tiles (OpenMaptiles)

Postile to serve the tiles

pg_tileserv should be next

OSM to build the background

custom styles, light

FOSS4G
BUENOS AIRES 2021

OSLANDIA

Project management (tech)

Gitlab

code versionning

tickets

exclusive way to exchange with everydoby involved

kanban

CI (continuous integration)

3 servers to deal with (dev, test, prod)

lot of time saved every day

OSLANDIA

Now and tomorrow ?

The website is public (www.terristory.fr)

Next steps are :

OpenSource release (2021 ?)

More and more people involved (new regions of France)

More functionnalities

OSLANDIA

What to think ?

The whole building process makes the project's history and experience **unique**.

The battle for climate is open, and platforms such as **TerriSTORY** have a strong role to play.

Maybe it could be an **inspiration** for any project oriented towards opensource, opendata and resource mutualization.

OSLANDIA

Thank you

For more information :

Sylvain.beorchia@oslandia.com

www.oslandia.com

Terristory.fr

OSLANDIA

Sylvain Beorchia, FOSS4G 2021

infos@oslandia.com