Alessandro Frigeri (@afrigeri), Angelo Pio Rossi (@arosp), Nicolas Manaud (@nmanaud) and the OpenPlanetary Team
What is OpenPlanetary?

OpenPlanetary is a **non-profit organisation** which address the need of the **planetary science community** for **sharing ideas** and **collaborating** on common planetary **research** and **data analysis problems, new challenges, and opportunities**.
The story of a newborn

OpenPlanetary started back in 2015 from an initial participants effort to stay connected and share information related to and beyond the ESA’s first Planetary GIS Workshop. It then continued during the 2nd USGS Planetary Data Workshop, in Flagstaff - AZ, and aggregated more people.

In 2018, we established as non-profit organisation in order to provide us with a legal framework to sustainably fund our community framework, projects and activities, and better serve the planetary science community as a whole.
The OpenPlanetary components

Communication Framework

Gathering events
*OP Data Cafè*

Software and Data projects
OP Framework

- Slack
- Github
- Twitter
- Blog
- Public Forum (to be launched later this year)
OP Data Cafés

Both junior and senior scientists are invited to share their best practices, tools, science use cases and issues during informal hands-on sessions at planetary science conferences. (so far EPSC)

- Problem-solving for planetary data handling/workflows
- Short hackathon
- Q&A & gathering of requirements:
  - e.g. on version control, planetary data processing tools, geoprocessing tools.
OpenPlanetaryMap

We are building the first Open Planetary Mapping and Social platform for planetary scientists, space enthusiasts, educators and storytellers to easily and collaboratively create and share location-based knowledge and maps of Mars and other planets of our Solar System.

Basemaps
Vector-based basemaps of solar system bodies that can serve as base layer for your web map interfaces and visualisations.

Datasets
Open repository of datasets related to planetary geography, topography, geology, weather, climate, scientific missions and discoveries, robotic and human exploration.

Places
Georefencing and geocoding web services that will make it easy to discover, search, share, discuss and crowdsource a public dataset of places on Mars and the Moon.
previous "Where on Mars?" pilot project
PlanetaryPy: Merging individual efforts

- Inspired by AstroPy - [http://www.astropy.org](http://www.astropy.org)
- Bundle planetary related packages together, e.g.
  - SpycePy - [https://github.com/AndrewAnnex/SpiceyPy](https://github.com/AndrewAnnex/SpiceyPy) (mature → NASA JPL NAIFSPICE)
  - PlanetPy - [https://github.com/michaelaye/planetpy](https://github.com/michaelaye/planetpy)
  - PlanetaryImage - [https://github.com/planetarypy/planetaryimage](https://github.com/planetarypy/planetaryimage)
  - PlanetaryPy - [https://github.com/planetarypy](https://github.com/planetarypy)
- See the status e.g. on
  - [https://github.com/USGS-Astrogeology/TSC/pull/36](https://github.com/USGS-Astrogeology/TSC/pull/36)
OP / OSGeo and EuroPlanet RI Contact points

E.g. astro/geo interoperability: GeoFITS (Marmo et al., 2019; Minin et al., 2019)

10.1029/2018EA000388

10.1029/2018EA000405
OpenPlanetary and OSGeo

**Similarities:**
- tools and practices which promote *reproducible research*: OpenScience
- curation of specific projects

**Aspects specific to OP:**
- data intensive / centered tools (from planetary missions’ archives)

**Aspects specific to OSGeo:**
- software-development-intensive
Next events

2nd Planetary Mapping and Virtual Observatory Workshop - Paris - July 1-3 2019 Deadline for abstracts April 30th

European Planetary Science Congress - Geneve September 2019: OP Data Café
Get in touch!

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