

A spatial data infrastructure dedicated to the interoperable exchange of meteorological measurements in renewable energies



Centre O.I.E.

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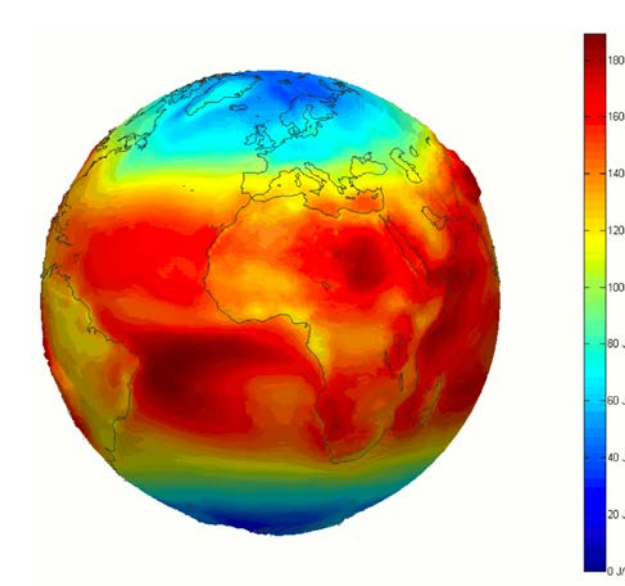
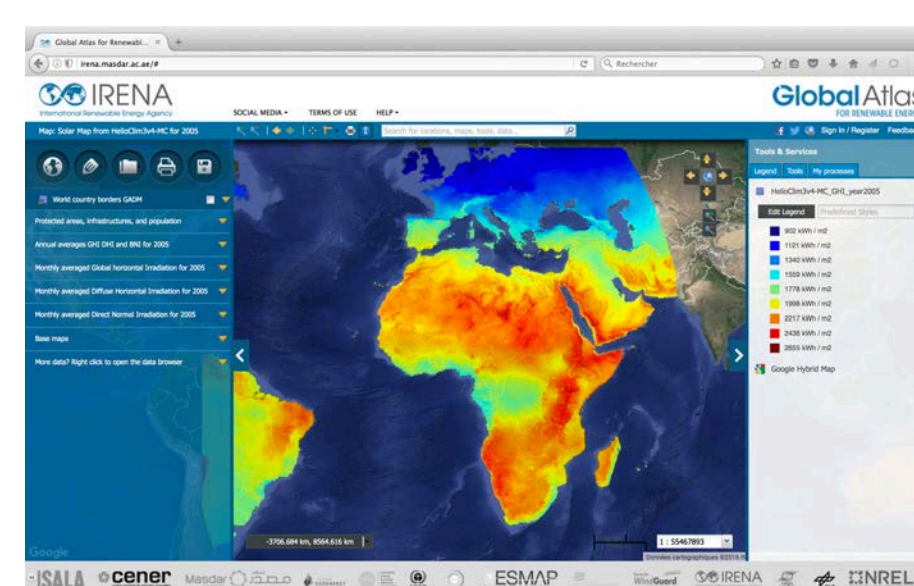
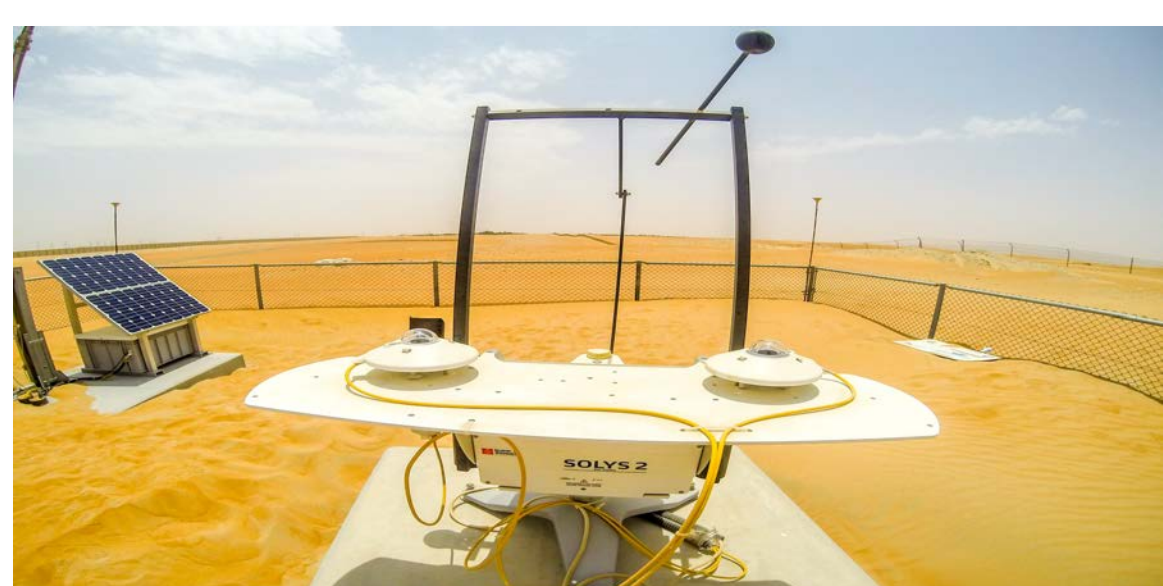
PARTENAIRES



1 - ESSENTIAL VARIABLES - NEEDS

Essential Variables - Surface Solar Irradiance (SSI) are provided by different Earth observation systems:

- *In-situ* pyranometric sensors
- Satellite image processing (e.g. HelioClim, Copernicus Atmosphere Monitoring Service, Eumetsat CM-SAF)
- Numerical weather models (e.g. ECMWF-IFS, ERA-Interim)



Needs - *in-situ* measurements are used for:

- Potential and prospective solar resources
- Resource assessment for bank loans
- Monitoring of existing solar plants
- Forecast for energy storage & planning



2 - IN-SITU MEASUREMENTS RESOURCES

Bottlenecks

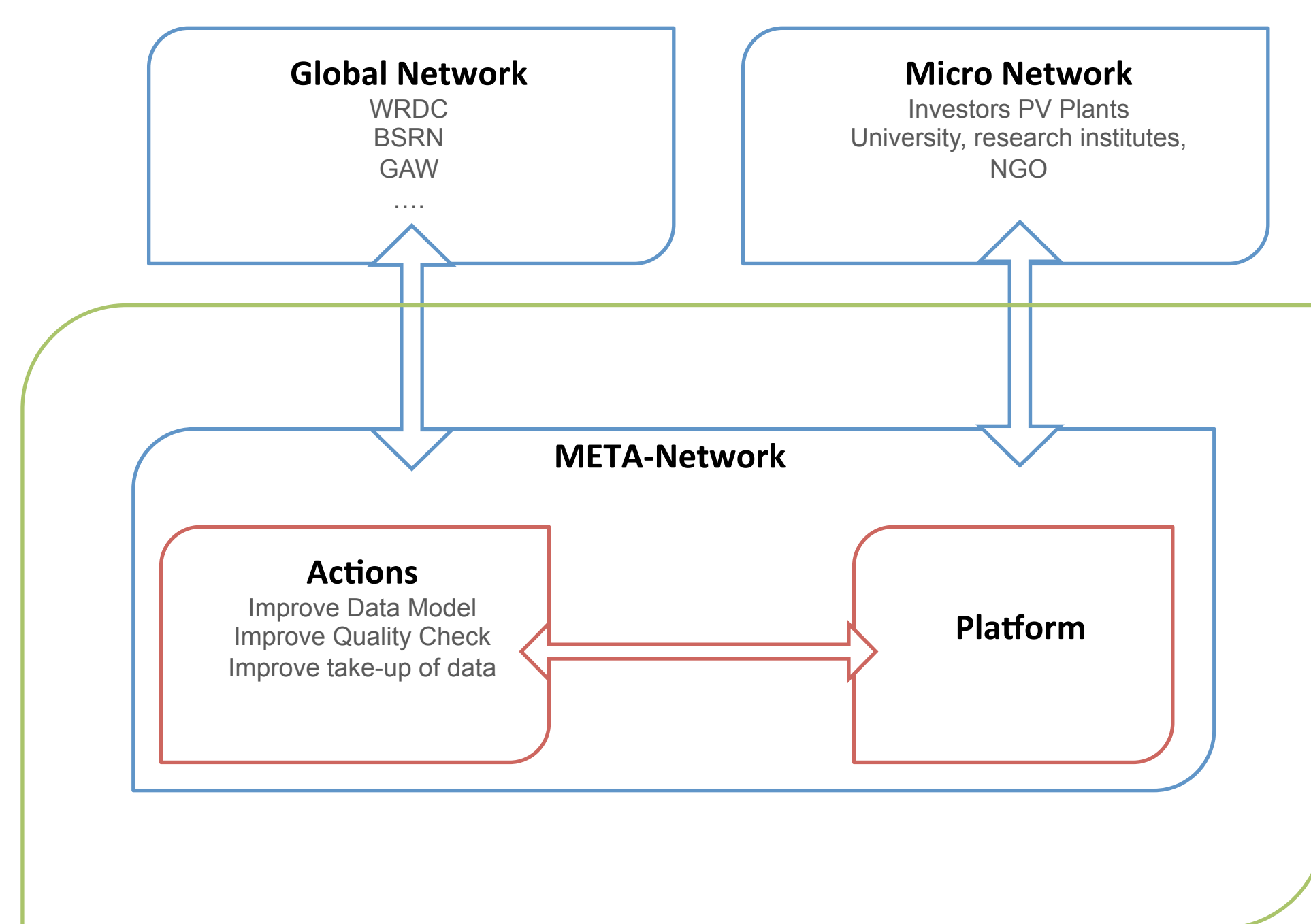
1. No major *in-situ* network dedicated to **Surface Solar Irradiance (SSI)**
2. Many small networks with poor harmonization
3. No interoperable access to *in-situ* resources

Opportunities

1. Investors or developers **install or rent their own *in-situ* pyranometric** stations
2. In EU **several hundreds of private ground stations** are co-located with power plants

3 - META NETWORK AS A SOLUTION

An efficient means to **connect various networks** and enable integration and access to data



Meta Network

Challenges:

- Convince public and private bodies to share their data
- Manage different intellectual property rights (IPR)
- Push OGC community to improve standards implementation and data model
- Push solar energy community towards adoption of common procedures for quality control

CONTACT

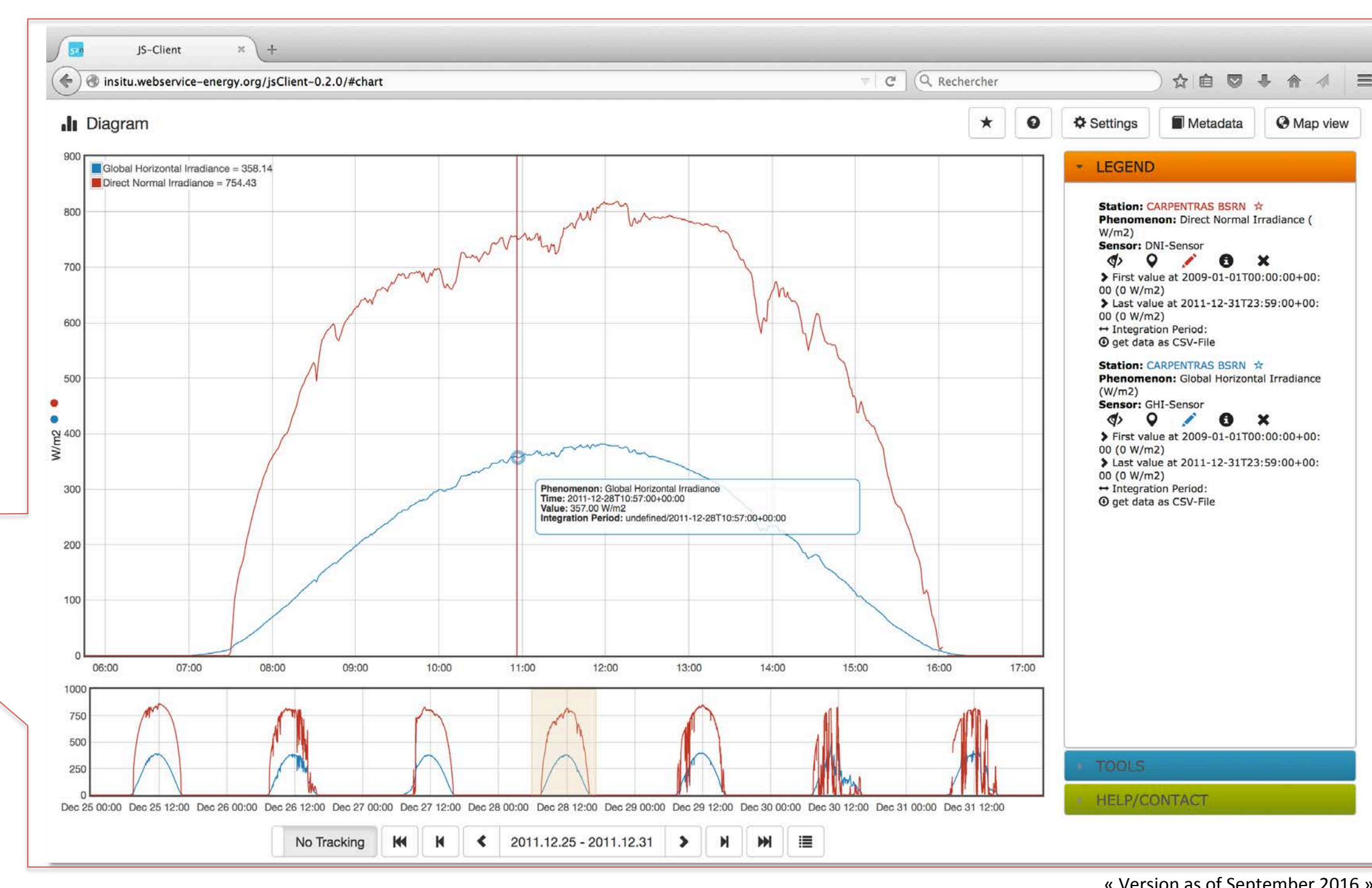
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Webservice-energy Spatial Data Infrastructure:

- Open Geospatial Consortium Catalog
- Connected to the GEOSS Common Infrastructure (GCI)
- Harvested by the DAB (Discovery and Access Broker)
- **Sensor Web Enablement** Architecture
 - Standard and interoperable
 - Easy to use (View & Download)
 - SOS Web Services / API
 - Metadata



<http://www.webservice-energy.org>