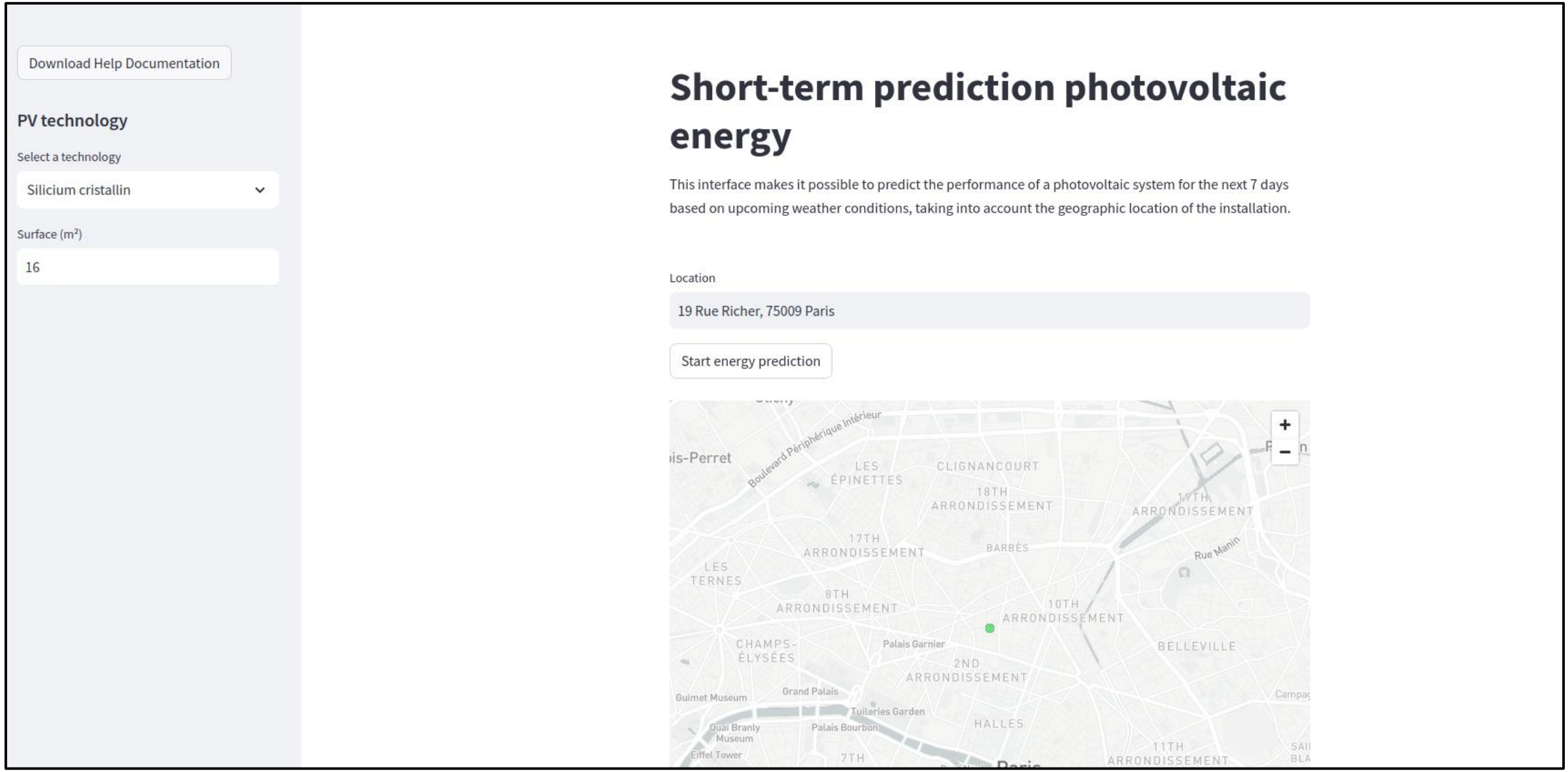
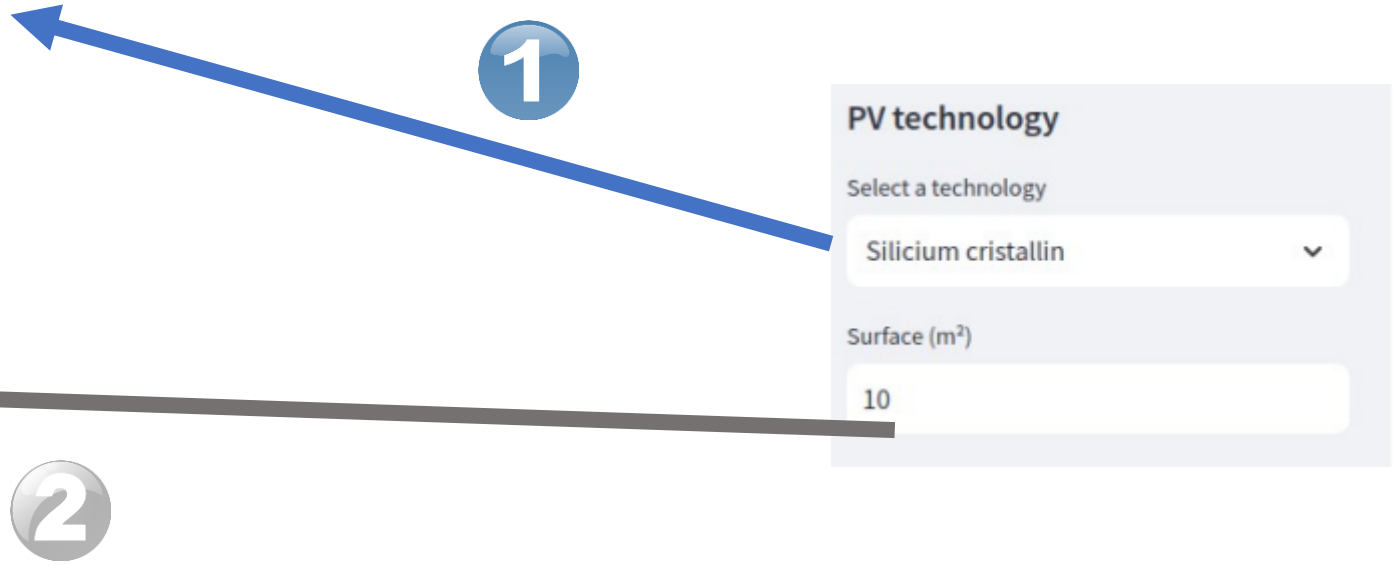
How Does the Web Application Work?



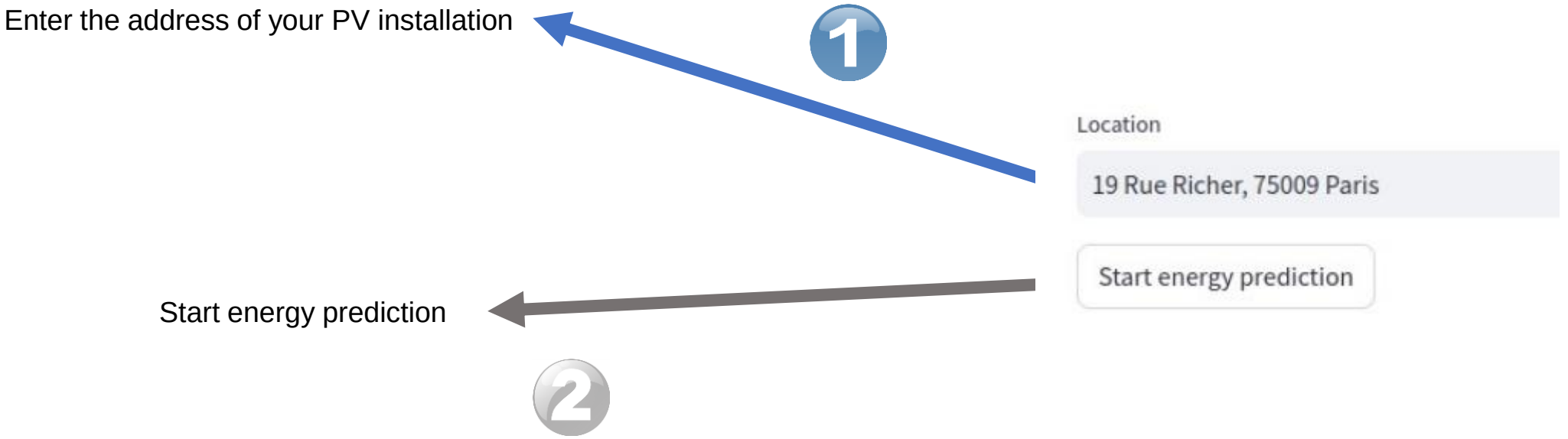
Step 1: Select PV technology the area of the modules

The performance of PV modules depends on the temperature and on the solar irradiance. At the moment we can estimate the power delivered by the following types of modules:

- crystalline silicon cells
- thin film modules made from CIS or CIGS
- thin film modules made from Cadmium Telluride (CdTe)



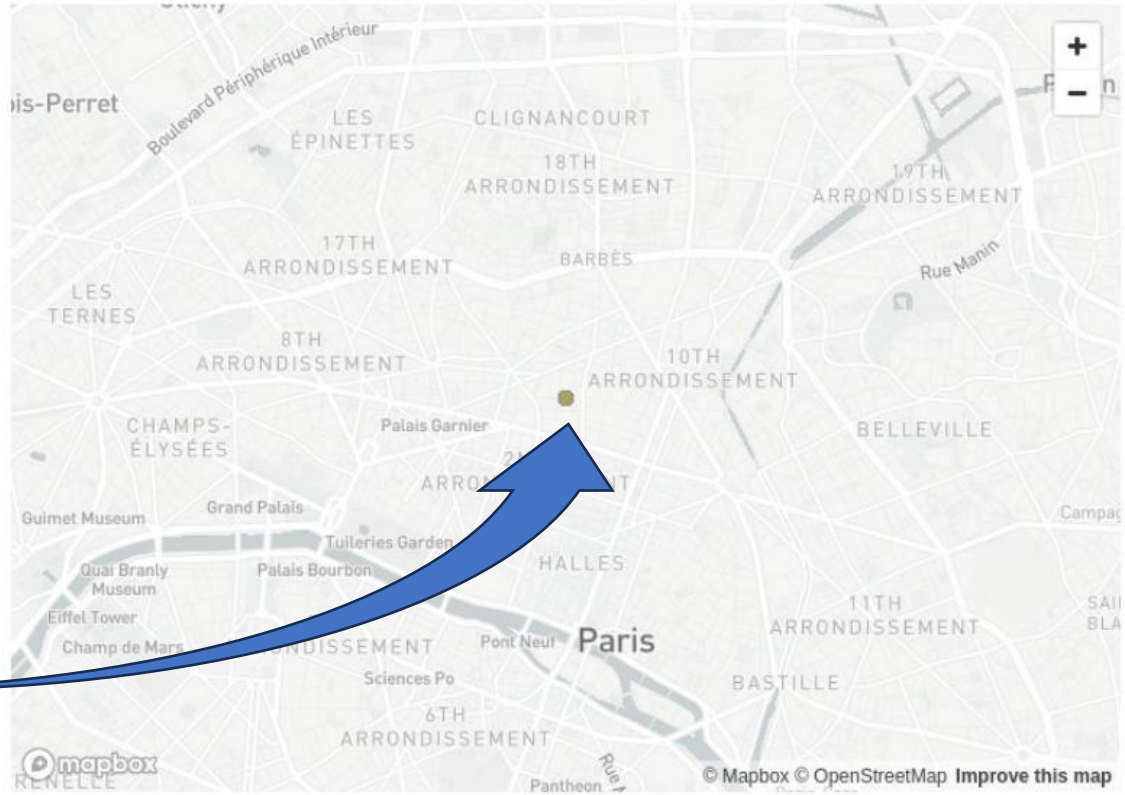
Step 2: Enter the address of your PV installation and start energy prediction



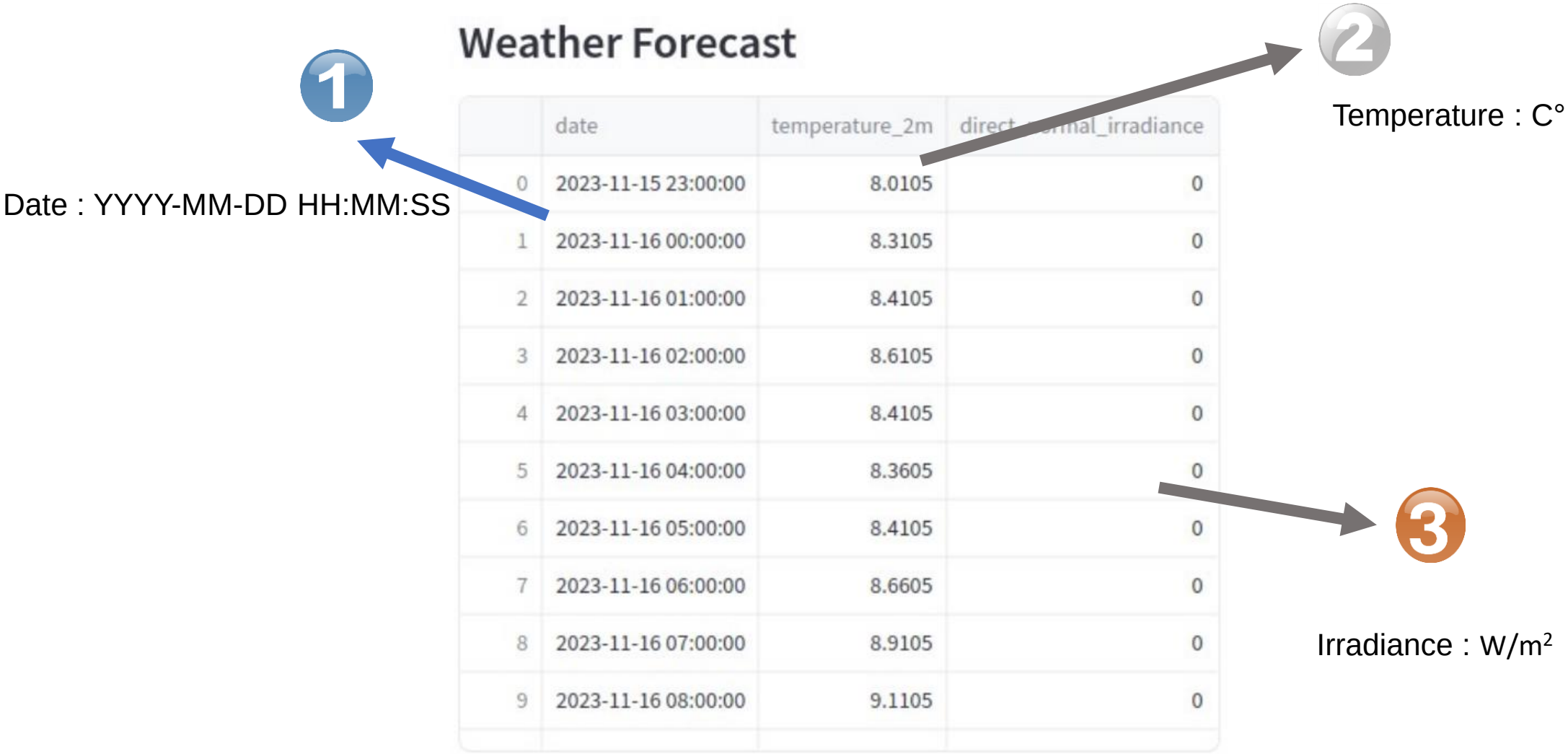
Result 1: display the location in a map and the associated geographical point

Geographical point & Surface

	Latitude	Longitude	Surface
0	48.874	2.3461	10



Result 2: display the weather forecast for next days of the selected location



	date	temperature_2m	direct_normal_irradiance
0	2023-11-15 23:00:00	8.0105	0
1	2023-11-16 00:00:00	8.3105	0
2	2023-11-16 01:00:00	8.4105	0
3	2023-11-16 02:00:00	8.6105	0
4	2023-11-16 03:00:00	8.4105	0
5	2023-11-16 04:00:00	8.3605	0
6	2023-11-16 05:00:00	8.4105	0
7	2023-11-16 06:00:00	8.6605	0
8	2023-11-16 07:00:00	8.9105	0
9	2023-11-16 08:00:00	9.1105	0

Result 3: display the power forecast for next days of the PV installation

Energy prediction

	date	temperature_2m	direct_normal_irradiance	Predicted_Energy
0	2023-11-16 23:00:00	7.9605	0	1.1158
1	2023-11-17 00:00:00	7.9605	0	1.1158
2	2023-11-17 01:00:00	7.8105	0	1.0932
3	2023-11-17 02:00:00	7.7105	0	1.0775
4	2023-11-17 03:00:00	7.5605	0	1.0569
5	2023-11-17 04:00:00	7.6605	0	1.07
6	2023-11-17 05:00:00	7.3605	0	1.0293
7	2023-11-17 06:00:00	7.4105	0	1.0362
8	2023-11-17 07:00:00	7.3605	0	1.0293
9	2023-11-17 08:00:00	7.6105	61.3694	629.9666

1

Date : YYYY-MM-DD HH:MM:SS

2

Temperature : C°

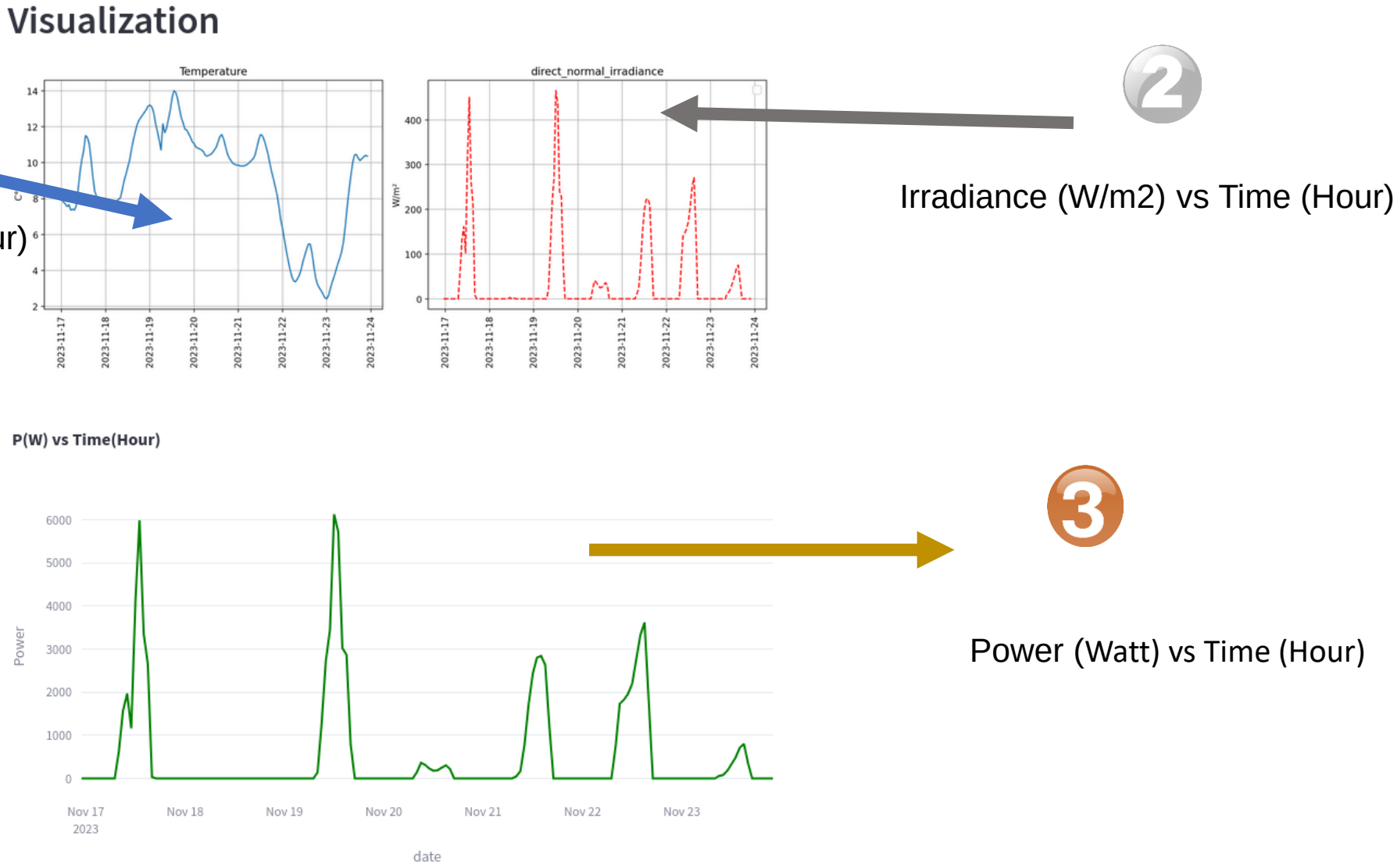
3

Irradiance : W/m²

4

Power : Watt

Result 3: display the power forecast for next days of the PV installation



1

Temperature (C°) vs Time (Hour)

2

Irradiance (W/m2) vs Time (Hour)

3

Power (Watt) vs Time (Hour)