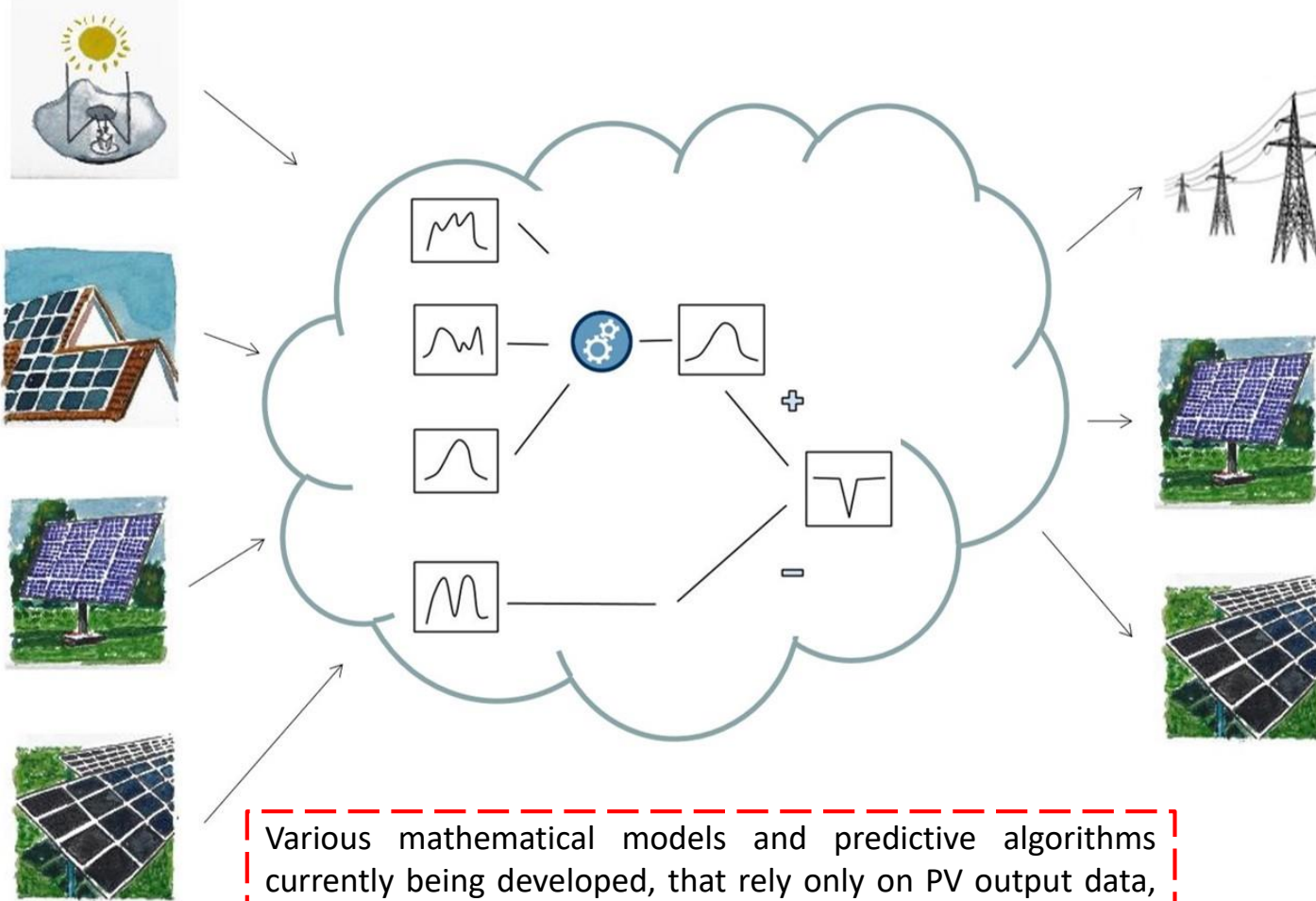


PROGNOSIS - Predicting Solar Energy Production



We will collect real time Photovoltaic (PV) Energy Output data from a vast network of grid connected PV Plants through an already developed Application Programming Interface (API) from various inverter companies.

The short term (i.e. 15-30 min time horizon) predicted electricity output from our proposed solution will be fed to Regional Transmission Organizations (RTOs) and to PV Plant Managers, to improve grid stability and increase the penetration of further PV plants across the United States.

Various mathematical models and predictive algorithms currently being developed, that rely only on PV output data, without the need of exogenous data (i.e. satellite images, weather conditions, all-sky imagers) will be used to predict the performance of any PV plant across the United States.

PROGNOSIS Team: Dr Roshanak Nateghi, Associate Professor at Purdue University (Mathematical Modeling and Machine Learning)
Dr Alexandros Charalambides, Visiting Scholar at Purdue University (Solar Energy and Meteorology)
Mr Constantinos Michael, Senior Software Engineer



U.S. DEPARTMENT OF ENERGY