

algoWatt wins the KITT4SME Open Call with the AIGreenWaste project for biodigestion plants

- **An innovative solution based on artificial intelligence and predictive models will be developed and applied to waste management and smart environmental plants**
- **The project will implement new decision support tools and address a wider range of machinery models for biodigestion plants and energy and material recovery from the organic fraction of municipal solid waste**

algoWatt, a GreenTech Company listed on the Euronext Milan market of Borsa Italiana, has been awarded a €100,000 grant for the development of the **AIGreenWaste** project, an innovative software solution based on artificial intelligence and predictive models applied to waste management and smart environmental systems. AIGreenWaste will be **funded under the cascading grants** call opened by the **KITT4SME** project (<https://kitt4sme.eu>) **funded by the European Union** (Grant Agreement N° 952119) **through the Horizon 2020 - Industrial Leadership Programme** and will enable the implementation of new operational functionalities based on the **proprietary software AIGreen Digesto**, which includes decision support tools for operators of biodigestion plants and energy and material recovery from the organic fraction of municipal solid waste. The solution is based on simulations and scenarios developed by *cognitive computing* and *machine learning* solutions and has been developed using data and production parameters from the GreenASM anaerobic biodigestion and composting plant in operation at Nera Montoro (TR) in Umbria.

Unique partner

algoWatt is the sole partner in the AIGreenWaste project. KITT4SME is a Horizon 2020 project coordinated by SUPSI (Scuola Universitaria Professionale della Svizzera Italiana) and developed by a consortium including Holonix, CRIT, VTT, ART-ER, European Dynamics, Warsaw University of Technology, Gate SpA, Ginkgo Analytics, R2M Solutions, Martel Innovate, CSIC and Rovimatica.

The project

Activities in the AIGreenWaste project will include enhancing and generalising functionality to provide operators with additional decision support tools and address a wider range of plant machinery models, and integrating into the KITT4SME platform and associated digital marketplace to reach a wider portion of biodigester plants beyond algoWatt's current network of commercial partners.

A biodigestion plant is a system that uses organic waste to produce fertiliser and biogas through an anaerobic process and methanogenic bacteria. The biomass processed is the biodegradable fraction of products, waste and residues of biological origin from agriculture, including plant and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin. The biogas produced is a mixture of various types of gas, consisting mainly of methane (at least 50%) and carbon dioxide, which can be burned to produce electricity or

heat. The biogas can also be purified to extract the biomethane component that can be fed into the municipal grid.

Current biodigester systems need to be manually optimised by plant operators to produce more biogas, reduce the amount of residue and stay within the correct *range of* operating parameters (e.g. viscosity) to reduce the risk of maintenance downtime. This can be done by adjusting the settings and inputs of the machinery, controlling parameters such as the control of the speed of biomass injection into the biodigester, the type and quality of biomass injected and the amount of water fed into the system or the working temperature. Based on the parameters measured by the sensors, the operator varies these inputs and settings to optimise biogas production while minimising feed and post-treatment costs. This can provide the operator with useful decision support in the operational management of the plant, or, in a more advanced scenario, the prediction algorithm can directly control the feed rate of the biodigester.

KITT4SME Open Calls

KITT4SME is part of the ICT Innovation for Manufacturing SMEs initiative (I4MS, <https://i4ms.eu/>) to digitise the manufacturing industry, in particular, SMEs, DIH and Mid Caps that want to improve their products, business processes and business models through digital technologies. KITT4SME provides SMEs with a modular and customisable digital platform, which allows companies to combine hardware and software modules to create digital kits tailored to their needs and processes, enabling them to introduce artificial intelligence into their production systems by reducing the difficulties in adopting and using cutting-edge technologies. The solution developed within the AIGreenWaste project will be made available on the project's RAMP digital marketplace, a community of developers and end users for Industry 4.0, and through the I4MS initiative.

This press release is also available on the Company's website www.algowatt.com.

algoWatt (ALW), *GreenTech solutions company*, designs, develops and integrates solutions for the management of energy and natural resources in a sustainable and socially responsible way. The company provides management and control systems that integrate devices, networks, software and services with a clear sectoral focus: digital energy and utilities, smart cities & enterprises and green mobility. algoWatt was born from the merger of TerniEnergia, a leading company in the renewable energy and environmental industry, and Softeco, an ICT solutions provider with over 40 years of experience for customers operating in the energy, industry and transport sectors. The company, with over 200 employees in 7 locations in Italy and investments in research and innovation amounting to over 12% of its turnover, operates with an efficient corporate organisation, focused on its reference markets: Green Energy Utility: renewable energies, digital energy, smart grids; Green Enterprise&City: IoT, data analysis, energy efficiency, building and process automation; Green Mobility: electric, in sharing and on demand. Different markets, one focus: sustainability. algoWatt is listed on the Euronext Milan market of Borsa Italiana S.p.A..

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