



Artificial intelligence increases returns through automated operations management of solar farms

Düsseldorf, September 28th 2020 – The efficiencies of both wind and solar plants have made great progress in recent years. The next step in increasing efficiency now lies less in the plants and more in their operation: "This is where Operations Management 4.0 is currently being developed", says Markus W. Voigt, CEO of the aream Group. "By using artificial intelligence, the energy yield can be increased even more significantly."

Currently, more and more investment capital is flowing into operating solar and wind power plants, but also into new solutions for operation and monitoring. "That's why we offer not only access to the plants, preferably as a portfolio for risk diversification, but also extended services in all aspects of renewable energies", says Voigt. "This is particularly interesting for private equity investors."

One example of forward-looking solutions is the Vienna-based raicon GmbH, which has developed the first autonomous control center for renewable energies. "Now that the pilot phase has been completed, more than 50 solar farms and over 80 roof-mounted solar plants are already working completely with the system", says Ralf Tschanun, CEO at raicon. These include plants from the aream Group, which has a stake in raicon GmbH.

The data from the systems are received and evaluated by a self-learning system and, if necessary, an order is automatically generated for a technician on site to carry out repairs or maintenance. "Machines are much faster, more efficient and more reliable. For example, we manage to reduce the number of false alarms to zero", says Tschanun. And Voigt adds: "This is a completely new dimension in operations management of such systems."

Until now, renewable energy generation plants have been built and then usually maintained and operated by external companies. Various service providers offer such operation and maintenance (O&M) contracts. "The question is why the owner of such a plant should outsource exactly the area that is crucial for the profitability of the plants. Because in addition to the remuneration for the electricity, which is formed on the market or determined by long-term supply contracts, the energy yield is the decisive factor for the return on investment", says Voigt.

And this can be controlled by an autonomously functioning operations-management. "It makes sense for the owner to bring monitoring and operation in-house, maintenance must then be carried out on site", says Tschanun. "This provides more transparency, ensures lower costs and also more efficient maintenance." Machines are thus able to use historical data to determine when, for example, a component needs to be replaced or whether the errors displayed are really hardware problems. "The number of false alarms, which always require an expensive on-site inspection, is reduced to zero", says Tschanun. In addition, the costs for maintenance and repairs are also reduced because real errors are detected and corrected faster before they become a major problem.

"We assume that such solutions will become more and more established in the industry", says Voigt. "Now that the big leaps in efficiency have been exhausted, operating costs are the point at which additional returns can be generated."

More Information: www.arem.de.



About aream

The aream group is a fully integrated investment and asset manager for institutional investors with a focus on renewable energies. With a transaction volume of EUR 1.5 billion and a managed investment of EUR 1 billion, aream has been providing the entire spectrum of asset management services for 15 years, thus ensuring the commercial and technical optimisation of assets. Comprehensive services enable investments to be implemented from the planning and construction phase through to operation in line with investors' specifications. Furthermore, aream offers access to private equity opportunities in the field of clean energy and energy efficiency. As a signatory to the UN Principles for Responsible Investment (UN PRI), aream actively includes ESG issues in its investment analysis.

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