

## Press release

Technology partnership

### **Elewit and IBM launch a pioneering solution to accelerate the digitalisation of the management of electricity network assets**

- The two companies have signed an agreement to market SAGA, an Elewit software that will enable electricity transmission and distribution companies to manage the maintenance and renewal of their network assets more efficiently.
- SAGA is a unique solution in the market because it combines the electricity infrastructure management experience and knowledge of the Red Eléctrica Group, Elewit's parent company, and IBM's potential and leadership in artificial intelligence and advanced data analysis, using IBM Maximo APM for Energy and Utilities.
- In an increasingly demanding economic environment, this solution makes it possible to continue to maintain the quality of an essential service for society such as that of the supply of electrical energy.

Madrid, 12 November 2020

Elewit, the technology subsidiary of the Red Eléctrica Group, and IBM have signed an agreement that will enable the digital transformation of the management of electricity network assets to be accelerated by marketing SAGA (Advanced Asset Management Solution), a pioneering initiative in the electricity sector that was conceived as an internal project within Red Eléctrica de España. Specifically, it is a technological solution built using IBM's artificial intelligence which allows electricity transmission and distribution companies to evolve from the traditional periodic maintenance model to one of predictive maintenance, based on the condition of the assets and the overall risk of the network. SAGA achieves this objective by optimising asset maintenance at an individual level, improving the reliability of the asset and the planning of maintenance activities from a holistic perspective.

For Silvia Bruno, Chief Innovation & Technology Officer at Elewit, "the marketing of SAGA is the result of a unique alliance of two leaders in the energy and information technology sector".

For his part, Daniel Navas-Parejo, director of the energy and utilities sector of IBM Spain, highlights the alliance as a "pioneering agreement in the industry and a demonstration of how disruptive technology such as artificial intelligence can help solve the most demanding business challenges".

Ms. Bruno and Mr. Navas-Parejo made these statements today during the presentation of the agreement, in which they defined SAGA as the response of the Red Eléctrica Group to the challenges currently faced by companies managing electricity distribution networks when it comes to maintaining and renewing their assets. The electric utilities sector, which operates under more complex regulatory frameworks and is immersed in a process of modernising and digitalising their networks, is key for the energy transition. "This scenario poses a difficult context for these organisations, which must adapt to the new model and, at the same time, continue to provide their service with high levels of quality, minimising the risk and network non-availability and trying to maximise profits", added Ms. Bruno.

## A comprehensive solution with state-of-the-art technology

SAGA is a unique solution in the market because it brings together, on the one hand, the electricity infrastructure management experience and knowledge of the Red Eléctrica Group, Elewit's parent company, and IBM's potential and leadership in artificial intelligence. SAGA takes advantage of the potential of IBM Maximo APM for Energy and Utilities and public cloud and integrates the information offered by sensors based on Internet of Things and operation technologies. Specifically, SAGA optimises asset maintenance activities and planning through three capacities:

- **Asset management:** allows a company to know the current state of assets and estimate the future condition of the assets thanks to advanced analytical algorithms combined with artificial intelligence that calculate their health status, risk and probability of failure. Based on this analysis, the system proposes the necessary maintenance and replacement or renovation needs, based on the business rules, to ensure the optimum maintenance of each asset on an individual level and including, where appropriate, the scheduling of the associated non-availability of the assets required.
- **Management of the flora and vegetation in the vicinity of the electricity lines:** taking as input values the results obtained through LIDAR (Laser Imaging Detection and Ranging) inspections and the prediction of vegetation growth for each species, the software automatically generates the felling and pruning plan over a four-year horizon.
- **Holistic planning of the activity:** using the results obtained, the system integrates, prioritises and plans the management of assets and vegetation clearing activities, including the optimised planning of the necessary disconnection requests, resulting in a global planning of the activity (works, replacement or renovation projects and disconnections). This holistic approach generates efficiencies through synergies, minimising the annual rate of non-availability and the global risk of the network and improving coordination between business units.

SAGA will completely transform management processes and strategies to adapt to this change in paradigm and is already being successfully tested by the Spanish electricity system operator and transmission agent, Red Eléctrica de España, which manages a high-voltage grid with more than 44,500 km of line-circuit nationwide.

"SAGA offers companies the control of their data to turn it into useful knowledge. With this solution, they can focus their efforts and resources on critical assets, as they are fully aware of their status and risk at all times", said Silvia Bruno during the presentation. "So far, only a small percentage of maintenance activities by utility companies are performed following this type of predictive strategy based on advanced data analytics, but SAGA will change this trend. It will be a turning point in critical infrastructure management", concluded Daniel Navas-Parejo.

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**elewit** is the technological platform of the Red Eléctrica Group. It was set up in 2019 with the aim of offering solutions to the new challenges of the electricity and telecommunications sectors. With one goal: to drive the energy transition and improve connectivity to create a sustainable future.

To this end, Elewit focuses its activity on the following impact areas: citizens centrality; transmission and accessibility of information; renewable energies and flexibility in the operation of the electricity system; the electrification of society; development and the smart management of assets; and cybersecurity as a cross-cutting area.