

AGUSTÍN RAMÍREZ

CEO OF AGANOVA

“We want to partner with our clients to reduce their water losses”

ÁGUEDA GARCÍA DE DURANGO CAVEDA

The Nautilus system together with the NEMO platform is Aganova's flagship, a company whose main objective is to reduce losses in large-diameter water networks.

In just a few years, Aganova has managed to position itself at the forefront of water leak detection technology. Thanks to the Nautilus system and the NEMO platform, the company has experienced growth that has allowed it to expand internationally. Leading Aganova is CEO Agustín Ramírez, who is committed to continuing to innovate so Aganova can become a benchmark firm in this field. We spoke to him about the company's trajectory and next steps.

First off, we would like to briefly know about your professional career.

In the water sector, I started as a leak detection technician at our local company EMASA, and later I worked in the sales department of the multinational firm SEWERIN, but it is true that I have

"Aganova's milestone was evolving from a services company with existing technology to one that develops new technologies"

always had a strong interest in the business. For this reason, while I worked, I trained in different areas focusing on technological entrepreneurship. Hence, shortly thereafter, and considering the shortage of companies specialising in leak detection systems, I set out to create my own company, offering services first locally, and then Spain-wide. But Aganova's main milestone was evolving from a company that simply offered services with existing technologies to a company that developed new technologies. And this milestone marked the beginning of the development of the Nautilus system.

What are the main activities carried out by the company, and what is Aganova's key mission?

Our company focuses on developing and offering solutions both domestically and internationally to reduce losses in large-diameter water networks. Our mission is to provide cost-effective, efficient and effective technologies under a recurrent use model that help minimise non-revenue water (NRW) across the world, and that can offer our clients valuable information for decision making. To this end, we want the Nautilus System to become the stand-

ard solution to assess and detect leaks in large diameter networks, the same as loggers, correlators and geophones are for distribution networks.

As a young entrepreneur of a technology-based company in the water sector, what, in your opinion, are the challenges the sector faces, and how does Aganova contribute to addressing them?

From my point of view, one of the great challenges of the sector is reducing water losses due to leaks in the networks. Our industry must increasingly focus on and take responsibility for the high NRW that is still lost in the pipes. We cannot normalise this situation any longer. In many countries we still see a corrective management approach. In the case of leaks, solutions are sought, at best, after the management company has verified considerable flow losses. At Aganova, we want to promote a preventive approach to water management that, in addition to avoiding problems and minimising losses due to leaks, helps to understand the evolution and deterioration of infrastructure so essential to the population and so valuable to our clients. That is why we strive to offer systems that favour recurring pipeline checks.

The Nautilus system is Aganova's flagship technology. What does this technology consist of, and what are its advantages over similar devices?

Nautilus is a system patented in 68 countries and designed for the detection of leaks in large diameter pipes, greater than 250 mm. It is a system that works inside the pipe, with the advantages that this entails, and consists in introducing a sphere in the network without interrupting the service at any time. The sphere travels freely



"We are developing algorithms to help us understand the evolution of leaks and anomalies, based on data from different environments"

pushed by the flow, recording the acoustic information along the entire network inspected. On extraction, we analyse the information and can identify any leaks starting at 0.005 litres per second, air pockets, anomalies and their exact location.

One of the main advantages of Nautilus, in addition to the fact that it can be used in pipes of any type of material and depth, is its neutral buoyancy. In other words, its ability to keep navigating through the centre of the pipe, which gives us many advantages, including clearing any type of obstacle, navigating vertically, working at very low flow rates, covering any type of route and inspecting up to 35 km in a single journey. I would also like to highlight that our work methodology for the positioning of the leaks is based on synchronisation: the data obtained during the inspection is analysed in detail in our R&D laboratory, and this allows us to study and collate all the data obtained in the inspection and refine the precision of the results. Lastly, I would like to comment that in 2020 we have developed a platform called NEMO, which provides a working environment where clients can obtain information at any time about the inspections taking place in their networks, the results and anomalies found and, subsequently, can track their evolution. All this always bearing in mind the mission that I have mentioned previously: our technology is affordable, and its application is cost-effective.

In this regard, what success stories would you highlight in which the Nautilus system has been applied?

Since 2015, the year Nautilus went on the market, it has travelled through hundreds of kilometres of pipeline. We have many success stories; every centimetre travelled has been a success, because it has allowed us to learn to adapt to any situation and environment and improve hand in hand with our clients. To give you a relevant example, we are carrying out a project to review a thousand kilometres of pipes in the Middle East. Right now, we are right in the middle phase, but we have already been able to help the client reduce their losses by more than 1,300 m³ of water per analysed kilometre, which would mean an approximate cost of 650,000 euros per year. To the savings in water losses that preventive management brings, we must add other much higher indirect costs, and I want to note, for example, the fact that controlled, planned and programmed pipe repairs are much cheaper than urgent interventions due to damage to the network since emergency repairs entail very high additional costs and the consequent damage to end clients.

What role does innovation play at Aganova, and what are the next steps for the company in this regard?

Innovation is the foundation of our company; it is our engine. We have an important R&D team and facilities that allow us, in our test bench, not only to make improvements to the Nautilus system, but also to advance in the development of new technologies that we can offer to our clients.

We have different lines of work at the moment. First, we are working on the development of algorithms to help us understand the evolution of leaks and anomalies. To do this, we rely on the comparison of the data obtained throughout our recurring inspections within the same network, but also in different environments and situations. On the other hand, in our R&D department we want to fully exploit the ability to

capture information that our technology offers us from within the network. That is why we are developing new sensors to adapt them to Nautilus, and to broaden the spectrum of valuable information that we can offer to our clients for their own decision making. Finally, and from a field operations standpoint, insertion and extraction systems are being redesigned so that this can be performed more autonomously by our clients and partners. Today, our technicians travel to perform services around the world. The objective is to minimise these trips so that our partners can do the fieldwork, and thus reduce execution times. All this is aimed at promoting periodic and systematic inspections by clients.



In which markets are Aganova solutions already present?

At this time, we have a network of international partners and distributors in more than sixty countries around the world. This network allows us to provide a swift response to all our clients, but logically we would like to continue growing. This year, our main development is taking place in the Middle East and the United States, and our challenge is to achieve greater implementation in Asia and Europe.

What are the company's future plans?

As I've mentioned, all of our plans are aimed at turning Nautilus into a standard tool for recurrent use in large diame-

ter networks and our growth focuses on achieving this goal.

From a business model point of view, we are focused on strengthening and expanding our network of international partners. Indeed, at a time like the one we are living in now, due to COVID-19 and the current travel difficulties, the support of our partners is essential for the execution of present and future projects. And, in this sense, improving autonomy in the insertion and extraction of Nautilus is key, because it also reduces the amount of personnel needed in the field for delivering a service.

Our strategy is to partner with our clients to reduce their water losses and extend the life of their infrastructure as

much as possible through assessments and maintenance.

What is your vision of the digital transformation process in the water sector?

Although the sector must reflect continuously so as not to lose sight of its main mission, I believe that it is on the right track. We have managed to create solid awareness of the need for this transformation to ensure improvements in the use of water resources through digitalization. And, in fact, at Aganova the development of NEMO aligns us with the general objective of the sector in terms of digital transformation, since our platform can be linked to any platform used by clients, so that it can be integrated into their work environment.

