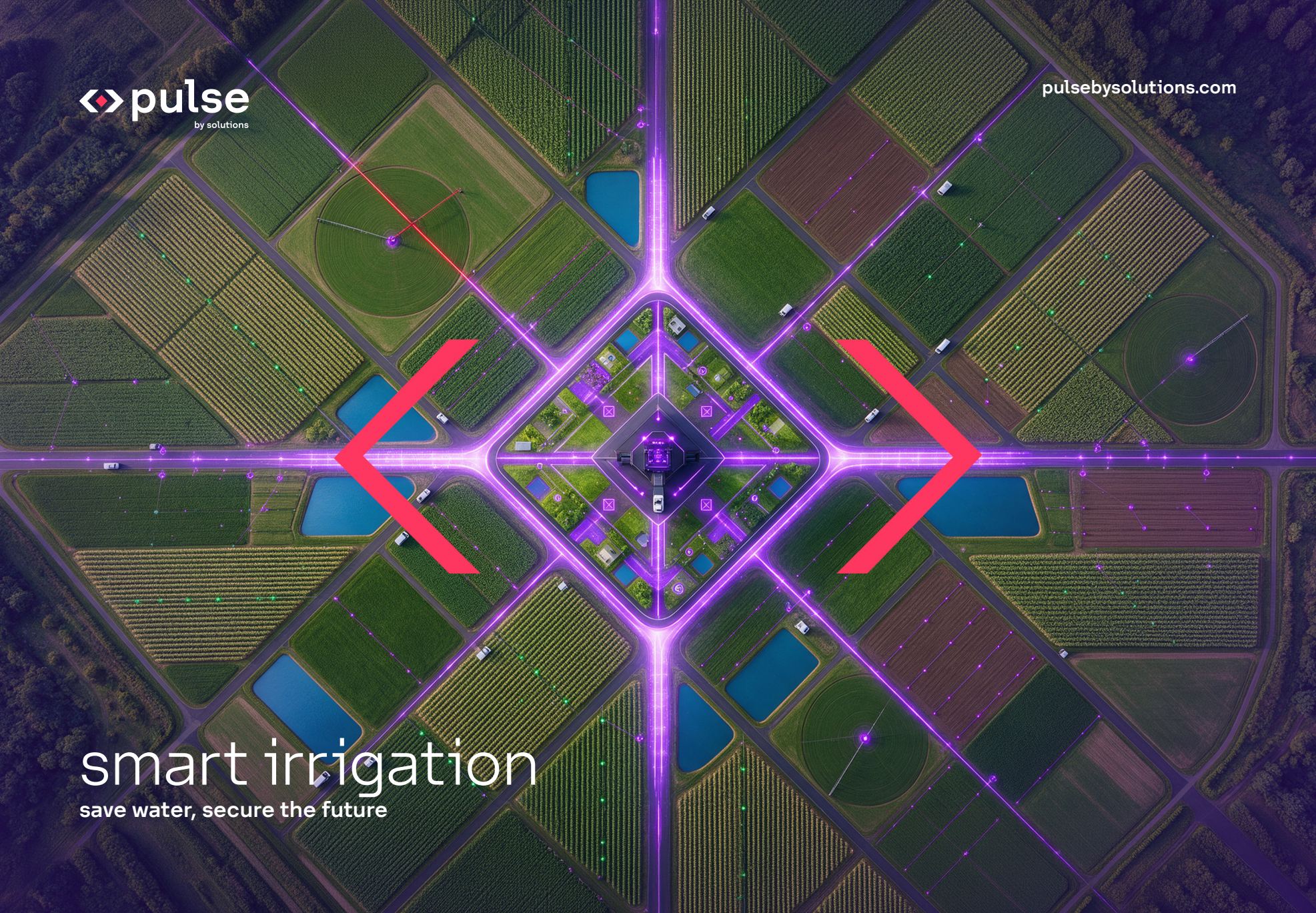

pulse
by solutions
pulsebysolutions.com
smart irrigation
save water, secure the future

smart irrigation

The water-food-energy nexus is core to sustainable development. An integrated holistic approach is central to addressing the increasing demand for all three, and finding solutions for water and food security, sustainable agriculture and energy.

With water being inextricably linked to food and energy - and a finite depleting resource - it is taking the forefront as one of the world's greatest challenges for sustainable development. The issue of water scarcity is becoming even more critical with the increase in global population, demand for food, dietary changes and living standards.

pulse by solutions and smart agriculture

Agriculture is the largest user of water in the world, consuming around 70% of fresh water resources. One of the main methods to effectively increase water productivity is to increase the efficiency of irrigation management.

With the need to focus on water security solutions that rationalize consumption, pulse has adopted the United Nations' Sustainable Development Goals, SDG # 12 - Responsible Consumption and Production.

pulse successful track record across the MEA region and its team of industry experts uniquely positioned it to launch its new smart agriculture solution. The new solution primarily targets smart irrigation and improved fertilization methods, to optimize resource management through greater access to technologies.

benefits of smart agriculture solution

- Decreasing water consumption
- Optimizing water management
- Optimizing fertilization efficiency
- Saving energy
- Reducing operational costs
- Increasing crop yield

smart irrigation solution

Utilizing IoT technologies and leveraging its in-depth expertise in automation catering to the various verticals, pulse has developed its own solution and in-house application for water management serving the agricultural sector.

pulse smart irrigation solution utilizes sensors installed in the field to collect and monitor accurate measurements allowing for a real-time assessment of parameters (i.e. humidity, temperature, soil moisture, environment indicators, wind speed, rainfall, etc.). The solution is comprised of integrated systems, designed to optimize the irrigation process efficiency, reduce water consumption and operational costs, as well as save energy.

The smart irrigation solution relies on moisture sensors placed at different levels in the soil relaying data to the SCADA servers, through the RTUs, and used in conjunction with the weather forecast to accurately determine the next irrigation date and amount of water needed to achieve optimal irrigation efficiency.

The solution achieves optimized resource management through the monitoring and control of soil moisture and consumed amounts of irrigation water and fertilizer, thereby impacting irrigation and fertilization scheduling and usage quantities.

In addition, pulse development of its in-house IoT applications support in providing historical, current, and predictive views of operations for better decision-making and management through actionable insights. Common features of the applications include: reporting, interactive data visualization tools, online analytical processing, data mining and predictive analytics techniques like forecasting, clustering and segmentation.

