DETECTRONIC

ORAKEL APM

INTELLIGENT MONITORING AND CONTROL TO DETECT PROBLEMS BEFORE THEY OCCUR

ORAKEL SYSTEM

IMPROVED OPERATIONAL EXCELLENCE

THE WASTEWATER NETWORK IS MADE UP OF THOUSANDS OF ASSETS, WITH DATA ACCUMULATING AND SCATTERED ACROSS DIVERSE AND DISCONNECTED SYSTEMS.

IT'S TIME TO TAKE CONTROL AND PUT THE DATA TO WORK....

ORAKEL Asset Performance Monitor (APM) is specifically designed to inform waste water asset performance.

Over the last decade, analysts in the Detectronic Data Centre have accumulated vast amounts of hydraulic sewer data amounting to more than 2 billion data points.

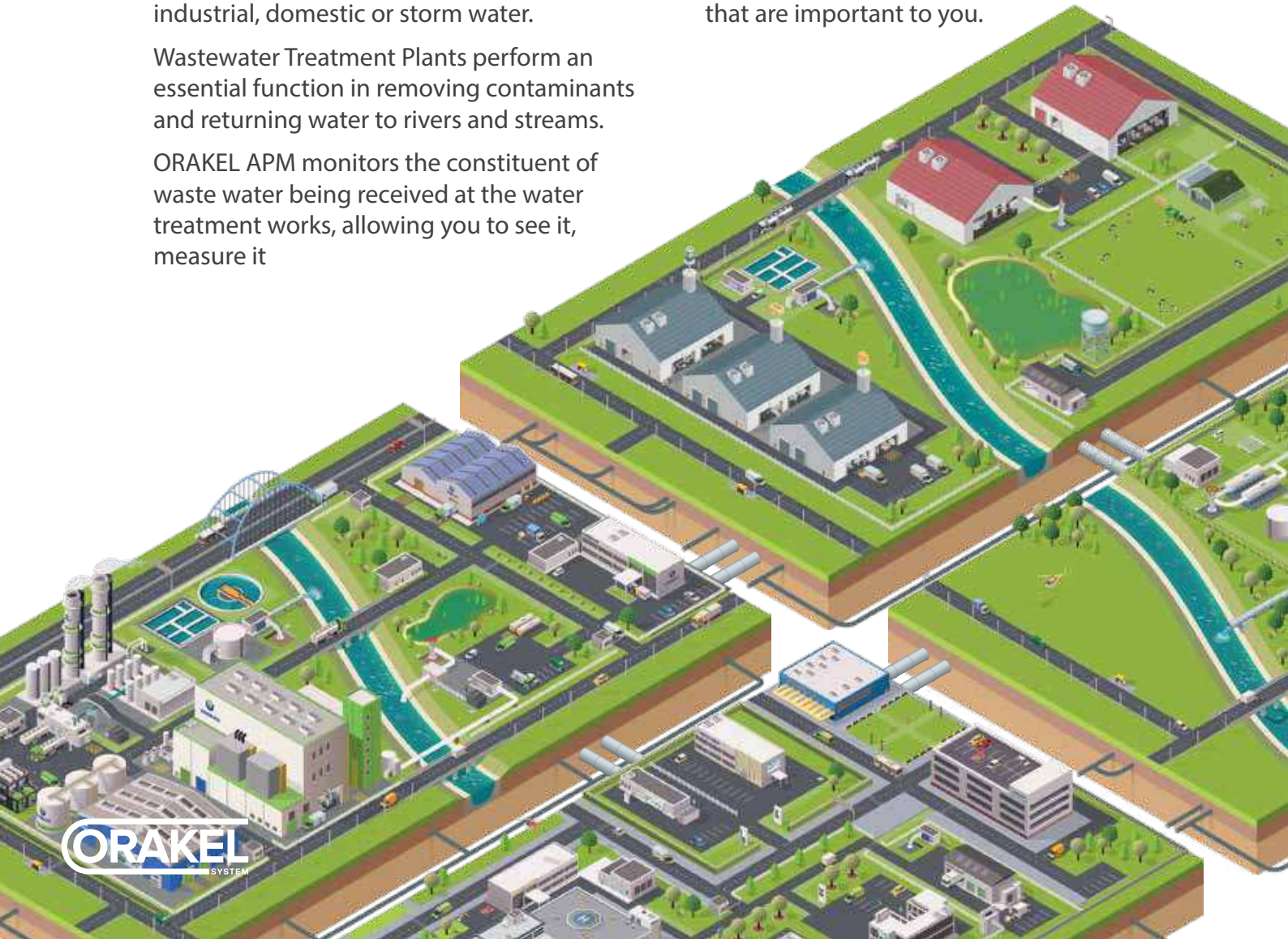
IDENTIFYING PERFORMANCE UPSTREAM

Wastewater differs greatly in terms of its solid content, its chemistry and biology, depending on its source and whether it is industrial, domestic or storm water.

Wastewater Treatment Plants perform an essential function in removing contaminants and returning water to rivers and streams.

ORAKEL APM monitors the constituent of waste water being received at the water treatment works, allowing you to see it, measure it

Take control and understand what's in your water with real-time water quality monitoring intelligence for the parameters that are important to you.



INSIGHT

The tool features a multi-analyser which has an integral flow channel allowing the system to calculate daily loads as well as instantaneous loading at the works.

Key parameters might include:

- Phosphates
- Dissolved oxygen
- Solid content

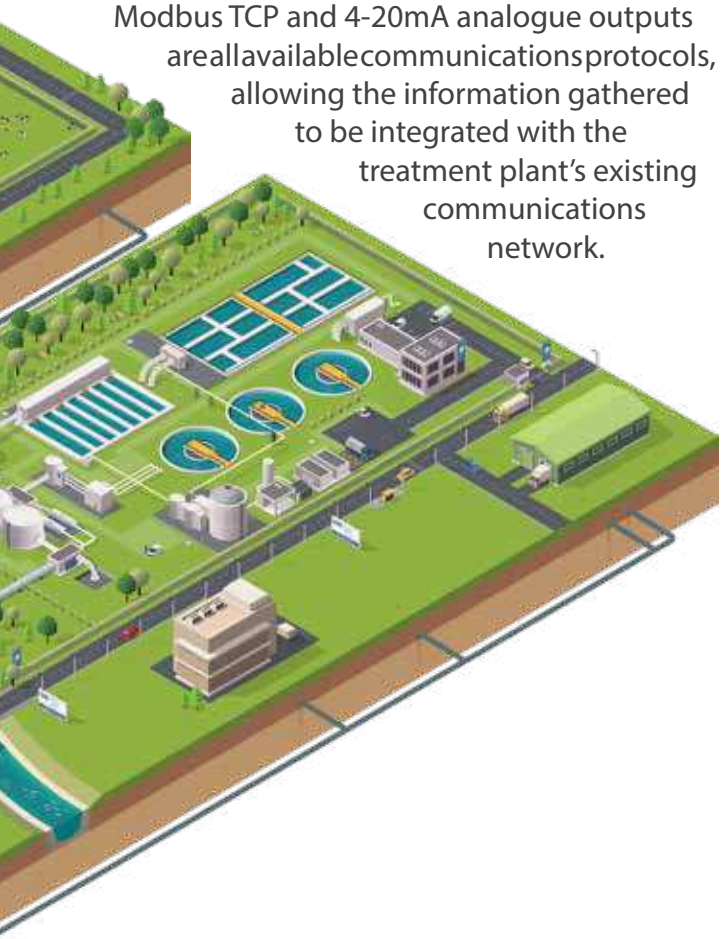
ACTIONABLE REPORTING

Correlating this flow and load data with other data from a series of smart sensors located within the network, it is now possible to develop a series of metrics that can be used to identify performance upstream in the catchment.

It empowers decision making and inspires actions.

SYSTEM INTEROPERABILITY

PROFIBUS, Modbus ASCII, Modbus RTU, Modbus TCP and 4-20mA analogue outputs are all available communications protocols, allowing the information gathered to be integrated with the treatment plant's existing communications network.



SOLUTION SCALABILITY

Seasonal variations and changing industrial operating conditions are examples of factors that can change the water chemistry.

Completely configurable, ORAKEL APM is designed to evolve with the challenges you face tomorrow.

Four different sensors can be connected to an ORAKEL Controller and four controllers can be connected together for one application.

When you add data logging as standard and multiple PID loops as additional options, ORAKEL is a perfect partner for complex water treatment processing plants.

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USING ADVANCED ANALYTICS TO PREDICT PROBLEMS BEFORE THEY HAPPEN

ORAKEL APM is a result of carefully mining the many data archives at the Detectronic Data Centre and working in close collaboration with the in-house R&D team at Detectronic.

All data is channelled through the Detectronic Data Centre, which is open 7 days a week. Skilled analysts work through the different data sets to build a detailed history, then correlate and develop the models needed to generate the right metrics, indicators and 'measurements of success'.

With increased visibility into performance upstream, we create user-defined alarm criteria to ensure you receive early warnings of potential problems before they reach the treatment plant. With this additional forewarning you can plan intelligently, evaluate alternatives and make informed decisions to manage the water entering the plant for optimal operating performance.

ENSURING COMPLIANCE

Dealing with severe weather events, avoiding sewage overflows, protecting the environment, complying with stringent regulatory standards and avoiding penalties are challenges for everyone in the wastewater industry.

PR19 has four performance commitments on asset health:

1. MAINS BURSTS
2. UNPLANNED OUTAGES
3. SEWER COLLAPSES
4. TREATMENT WORKS COMPLIANCE

With the ORAKEL APM, water companies will be able to use the insights of what is happening upstream together with the characteristics of the water prior to it reaching the plant, to improve operational efficiencies and ensure compliance once the water enters the treatment works.

PRIORITISING MAINTENANCE PROGRAMS

Whether it's preventative or predictive techniques, wastewater treatment plants carry out comprehensive maintenance programs.

With the knowledge generated from the ORAKEL APM, engineers can eliminate redundant maintenance and prioritise maintenance around the equipment and failures that will have the biggest impact on risk.

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