

The Metasphere Analytics Platform

A foundation for smarter networks



Transforming data into actionable insights

Managing water and wastewater networks requires more than just data. The Metasphere Analytics Platform (MAP) product suite provides a tiered approach to network management, from data mastery for rainfall impact modelling with MAP Rain, through proactive wastewater network control with MAP Sewer, to hyper-optimised and integrated intelligence with MAP Sewer Advanced.

Our solutions are designed to address specific water industry challenges, whether that is proactive flood management or pollution prevention. By transforming complex data into immediate, actionable insights, we help you enhance operational efficiency, ensure environmental stewardship, and protect the communities you serve.

Metasphere's products provide the critical foresight needed to move from a reactive to a proactive operational model, ensuring your network is resilient, compliant, and ready for the future.



The power of precision



MAP Rain - Mastering rainfall data for proactive management

MAP Rain is a powerful analytics platform engineered to process, interpret, and leverage vast volumes of rainfall data. It is the cornerstone of proactive flood and network management, providing immediate, actionable intelligence for water utilities and authorities.

Core features & capabilities:

- **Global-scale radar data processing:** Ingests and processes millions of radar rainfall datapoints at five-minute intervals, providing comprehensive coverage across the UK, Australia, US and Europe. This gives you a real-time, up-to-date view of rainfall across extensive operational areas.
- **Seamless data exchange:** Our proprietary application programming interface (API) acts as a universal translator for FEH analysis, enabling seamless, high-volume data exchange and integration with your existing client systems.
- **Intuitive data access:** Easily retrieves precise rainfall data for any specific point via an interactive map, and aggregates data across custom polygons to facilitate broader regional analysis.
- **Automated FEH analysis:** Equipped with an integrated, formalised Flood Estimation Handbook (FEH) analysis capability to accurately calculate the magnitude of any rainfall event for specified durations in minutes.
- **Historical rainfall data:** Supplies accurate, long-term historical datasets crucial for robust hydraulic model calibration and development.



Efficiency

Automates data aggregation, reducing manual effort and providing a consolidated rainfall picture in real-time.

Accuracy

Accelerates flood event analysis and ensures consistent, industry-standard reporting in compliance with the FEH.

Proactivity

Enhances the accuracy and predictive power of hydraulic models, leading to more effective infrastructure planning and design.

Critical foresight for wastewater

MAP Sewer - Proactive control for a healthier network

MAP Sewer is an advanced analytics platform specifically designed for the complexities of modern wastewater networks. It provides critical foresight for pollution prevention, operational expense reduction, and elevated customer satisfaction.



Core features & capabilities:

- Proactive blockage prediction:** Intelligent analytics anticipate and identify potential blockages, allowing you to address issues before they escalate into network failures or pollution incidents.
- Accurate flow estimation:** Delivers precise, real-time insights into the hydraulic behaviour of the wastewater network, supporting enhanced management of infiltration and inflow (I&I).
- Timely spill prediction:** Provides advanced predictive capabilities to identify and mitigate the risk of wastewater spills, safeguarding environmental health and improving customer outcomes.
- Customisable calculations:** Flexible calculation framework enables rapid addition of new analytics and metrics as well as intelligent alerts.
- Data Validation:** Delivers rapid analysis of any sensor data to identify a broad range of data quality issues and generate an overall assessment of data quality for the sensor. Daily reports summarise performance and update models to enhance machine learning techniques.



The peak of intelligence

MAP Sewer Advanced - Hyper-optimised operations

Building on the robust foundation of MAP Sewer, MAP Sewer Advanced offers a deeper, more sophisticated layer of intelligence. This solution is for organisations that demand hyper-optimised operations, enhanced predictive accuracy, and superior strategic planning for their wastewater networks.



Core features & capabilities:

- Hyper-accurate forecasting:** Leverages proprietary AI algorithms, including machine learning, for even greater precision in predicting network failures, enabling hyper-targeted intervention strategies.
- Dynamic network condition assessment:** Provides real-time insights into the structural and operational health of pipelines, identifying subtle changes that indicate impending issues that could develop into major incidents.
- Seamless data unification:** Direct integration capabilities with your existing SCADA, GIS, billing, and work order management systems create a complete, unified operational picture.
- Inflow & Infiltration:** Identify sources of I&I in your sewer network by disaggregating sewer level data and integrating results with simplified hydraulic modelling. Can be used as part of a high density Sewer Level Monitoring programme.
- Hydraulic model integration:** Combines hydraulic modelling and a data-driven approach, applying simplified modelling at scale and integrating model predictions with real operational data.



Operational efficiency

Transitions operations from costly reactive fixes to strategic, preventative maintenance, significantly reducing operational expenditure (OPEX) and environmental impact.

Optimised performance

Enhances hydraulic model accuracy and effectively manages I&I in wastewater systems, leading to optimised networks performance.

Environmental protection

Minimises pollution incidents, protecting environmental health and improving public perception.

Maximum protection

Reduces incident frequency and severity to an absolute minimum, ensuring maximal environmental protection and sustained customer trust.

Strategic planning

Facilitates the construction of digital twins that accurately mirror the physical network, supporting highly accurate scenario planning and informed infrastructure investment decisions.

Data democratisation

Breaks down data silos, supports cross-departmental collaboration, and empowers data-driven decision-making across the entire organisation.

The Metasphere advantage

A partnership beyond products



MAP Rain



MAP Sewer



MAP Sewer Advanced

At Metasphere, we believe the true value of technology lies in its ability to drive meaningful change. The MAP product suite is more than a set of tools – it is a strategic framework for creating smarter, more resilient and more sustainable water networks.

Our solutions are built on a foundation of intuitive innovation, a commitment to sustainable business practices, and open, honest communication. We partner with you to understand your unique challenges and deploy a solution that delivers measurable results.

Whether you are a water authority, wastewater service provider, asset manager, global consultancy, network management specialist, or engineer, the Metasphere MAP suite provides the scalable intelligence you need to optimise your operations, protect the environment, and serve your community with confidence.

Get in touch

Ready to transform your network?

Discover how Metasphere can help you turn complex network data into clear, actionable intelligence. Our team of experts is ready to discuss your specific needs and demonstrate the power of the MAP product suite.

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Metasphere is an industry brand, synonymous with telemetry excellence to help our customers prevent leaks and spills for a cleaner, greener world.

As a wastewater application specialist business, Metasphere provide monitoring solutions to the global utility industry with installations in more than 25 major utilities, government agencies and system integrators. The company liaises with all sectors of the industry, from major utility companies to environmental and regulatory bodies.

Metasphere is a Grundfos company, with operations in the UK and Australia.

Find out more at metasphere.co.uk



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