

# Where, why, what and how to analyse

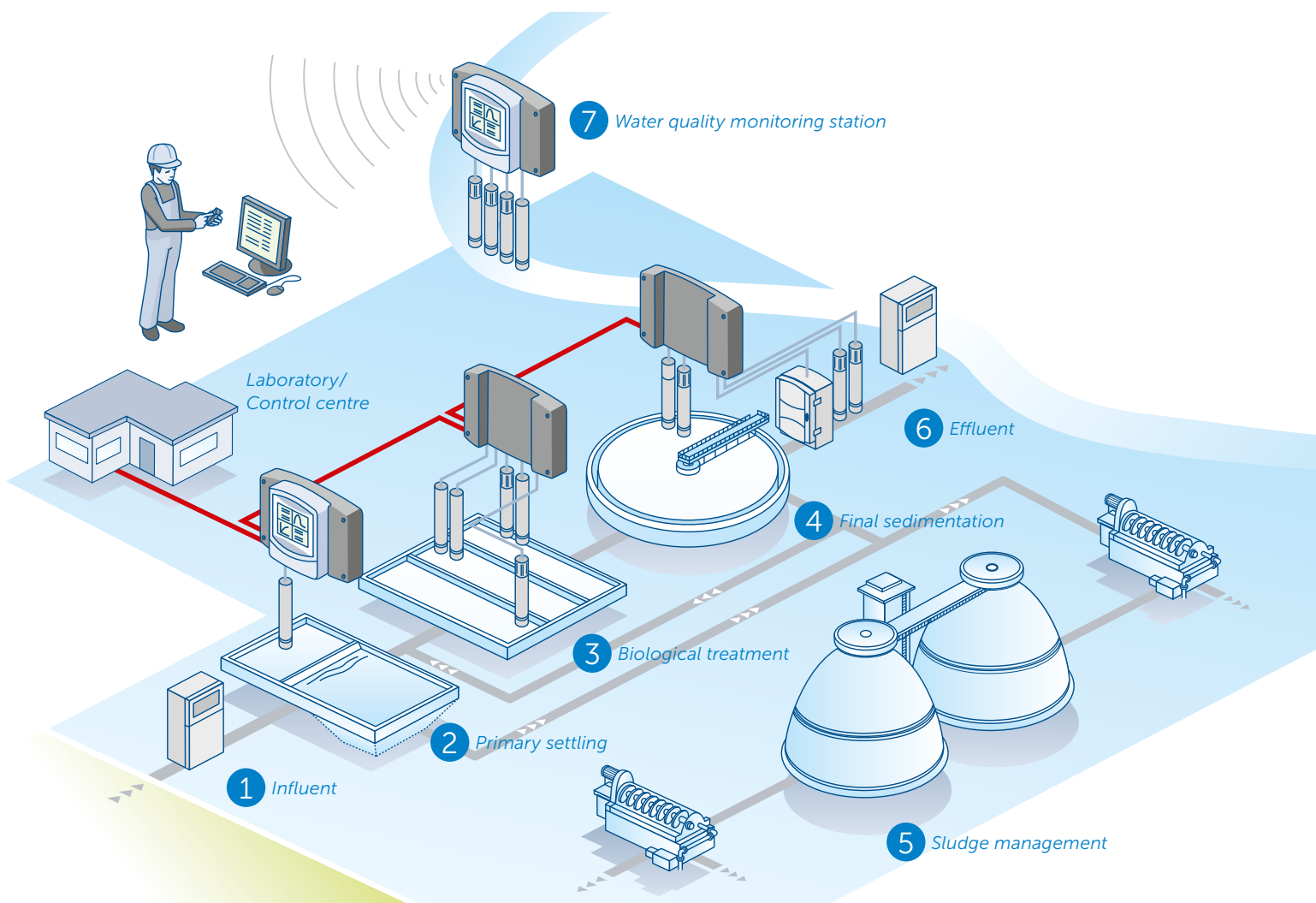
You need to be sure

- That your treatment process works efficiently and cost-effectively.
- That your plant is capable of handling unexpected load peaks coming from production.
- That your effluent complies to regulatory requirements.

This means that the analytics processes and products you rely on to make informed decisions must be accurate, reliable and informative all the time.

The Hach analytics portfolio is designed to give you confidence. From a simple, dedicated meter to on-line measurement or wastewater treatment optimisation our solutions are based on years of innovation and a desire to provide the simplest way to results you can trust. Our products, application support and local service help you achieve:

- Maximised uptime of equipment
- Analytics solutions that give a real return on your investment
- Savings on chemicals and energy costs



## Real Time Control optimisation solutions

Hach RTC solutions allow you to increase process stability and operational efficiency and ensure regulatory compliance. RTC optimisation solutions are available for:

- Aeration/nitrogen removal
- Phosphate elimination
- Sludge management

# INDUSTRIAL WASTEWATER

Where	Why	What*	How
1 Influent	Early indicator for unusual contaminants potentially harmful for the biological treatment	Conductivity, pH value	▶ ●
	Basic parameter used for load calculations	Flow	●
	Determination of the organic carbon load	BOD, COD, SAC, TOC	▶ ●
	Qualified sample for lab analysis	Sampler	▶
2 Primary settling	Sedimentation control, sludge pump control (to digester)	Sludge level	●
3 Biological treatment	Monitoring and controlling the efficiency of the biological treatment	Ammonium, Nitrate, dissolved Oxygen	▶ ● ■
	Monitoring and controlling ortho-phosphate providing input for phosphate elimination control	Phosphate, ortho	▶ ● ■
	Ensuring optimal sludge age for nutrient elimination	Suspended solids	▶ ● ■
	Ensuring optimal conditions for nitrification and denitrification	Organic acids	▶
		pH value	▶ ●
Ensuring optimal conditions for nitrification and denitrification in anaerob reactors	Acid capacity	▶	
4 Final sedimentation	Sedimentation control, sludge pump control (return to biological treatment or waste to digester)	Suspended solids	▶ ●
		Sludge level	●
5 Sludge management	Optimal thickening and dewatering performance with minimal polymer dosing; ensuring optimal solids/organic load and biogas production	Suspended solids	▶ ● ■
6 Effluent	Regulatory compliance, monitor treatment process performance and ensure compliance with legal limit values	Ammonium	▶ ●
7 Water quality monitoring station		Conductivity	▶ ●
		Flow	●
		Nitrate	▶ ●
		Organic acids	▶
		pH value	▶ ●
		Phosphate, ortho/total	▶ ●
		BOD, COD, SAC, TOC	▶ ●
		Turbidity	▶ ●
		Qualified sample for lab analysis	Sampler

▶ Lab analysis ● Online analysis ■ RTC Optimisation solutions

\* For additional parameters and solutions please contact your local Hach representative or visit our website.