

# Strategic implications of the revised UWWTD for wastewater OEMs

The revised UWWTD will affect treatment performance, monitoring, energy management, and deployment models in different ways across the wastewater sector. The below table summarises how key OEM opportunity areas translate into operational requirements, performance expectations, and likely competitive differentiators.

|                            |  Innovative solutions for expanded scope and integrated systems                                                                                                         |  Tertiary and quaternary treatment upgrades                                                                                                                                                         |  Stronger monitoring and transparency                                                                                                                 |  Energy neutrality                                                                                                                                              |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Opportunity area           | Deliver new, or upgraded, small-footprint treatment solutions for smaller agglomerations                                                                                                                                                                  | Retrofit and upgrade treatment trains to meet tighter nutrient and micropollutant requirements                                                                                                                                                                                         | Provide compliance-grade monitoring, reporting, and integrated data workflows                                                                                                                                                            | Cut energy intensity, add energy recovery and renewables, deliver energy neutrality pathways                                                                                                                                                       |
| Operational priorities     | <ul style="list-style-type: none"><li>• Packaged plants suited to small loads, low operator time</li><li>• Simple operation and maintenance, remote monitoring, service model</li><li>• Turnkey delivery, permitting support, civil integration</li></ul> | <ul style="list-style-type: none"><li>• Ozonation, PAC and GAC integration, plus polishing and by-product control</li><li>• Modular retrofit approaches, commissioning support, operator training</li><li>• Verification plan, sampling, indicator-based performance testing</li></ul> | <ul style="list-style-type: none"><li>• Sampling and analytical workflow, QA/QC, audit trail</li><li>• Instruments, SCADA connectivity, dashboards, alerts</li><li>• Data integration, governance, cybersecurity</li></ul>               | <ul style="list-style-type: none"><li>• Efficiency upgrades, aeration, controls, blower upgrades</li><li>• Biogas, CHP, heat recovery, sludge line optimisation</li><li>• On-site renewables, energy audits, roadmap delivery</li></ul>            |
| Performance considerations | <ul style="list-style-type: none"><li>• Compliance stability, wet weather resilience</li><li>• Total cost of ownership per p.e., install speed</li><li>• Operability, uptime, remote support effectiveness</li></ul>                                      | <ul style="list-style-type: none"><li>• Proven pollutant removal, stable across seasons and variable influent</li><li>• Predictable OPEX, carbon use, energy penalty, waste streams</li><li>• Verification readiness, evidence pack quality</li></ul>                                  | <ul style="list-style-type: none"><li>• Accredited, or recognised, methods where relevant</li><li>• Data completeness, time-to-report, reduced manual effort</li><li>• Integration success, alert quality, low false positives</li></ul> | <ul style="list-style-type: none"><li>• Proven kWh per m³ reduction, peak load reduction</li><li>• Net energy balance improvement, recovery yield</li><li>• Uptime, maintainability, measurable savings</li></ul>                                  |
| Likely differentiators     | <ul style="list-style-type: none"><li>• Standardised, scalable deployment models</li><li>• Low operator burden and remote support capability</li><li>• Rapid deployment across distributed wastewater assets</li></ul>                                    | <ul style="list-style-type: none"><li>• Integrated treatment and retrofit capabilities</li><li>• Performance validation and verification readiness</li><li>• Flexible deployment aligned with phased infrastructure upgrades</li></ul>                                                 | <ul style="list-style-type: none"><li>• Integrated monitoring and audit-ready reporting</li><li>• Reduced operational complexity and manual reporting burden</li><li>• Secure, interoperable data environment</li></ul>                  | <ul style="list-style-type: none"><li>• Combined efficiency, recovery, and renewable energy strategies</li><li>• Lifecycle optimisation and measurable energy performance</li><li>• Strong operational references and upgrade experience</li></ul> |