M SCIENCES · CLIENT WHITE PAPER

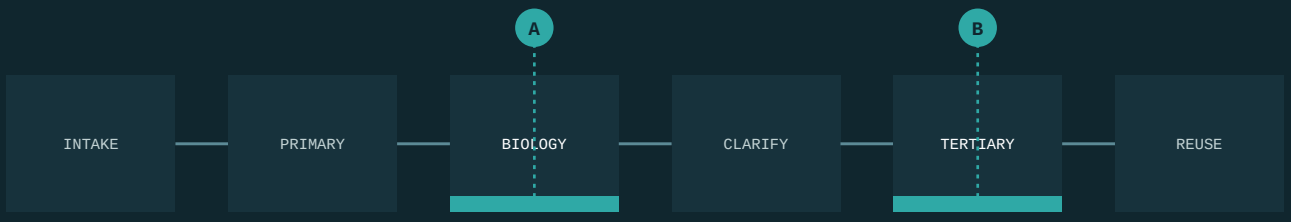
Rethinking industrial water performance

A brownfield pathway to better treatment economics, reuse and operating resilience

The executive question

Can an existing treatment train deliver a better fit-for-purpose outcome — with stronger economics, more reuse and greater operating resilience — without defaulting straight to major replacement?

TWO CANDIDATE POINTS OF INTERVENTION



A TREATMENT TRAIN YOU ALREADY OWN

FOR OPERATIONS · ENGINEERING · EHS · SUSTAINABILITY · FINANCE · PROCUREMENT

SEPTEMBER 2026

Evidence note: this document contains no M Sciences performance statistics. Application-specific claims are released only within the supporting evidence boundary.

CONTENTS

How to read this paper

This paper sets out how we think about industrial water, where our technology fits, what governs a decision to proceed, and how value is established and measured. It is written to be read in full by anyone weighing a treatment decision — and to be useful section by section to the different people who will weigh it. The guide below suggests where your interest is likely to start.

IF YOU RUN THE PLANT

Where the cost actually sits, and what governs whether we engage at your site.

01 · 02 · 08

IF YOU SELECT THE TECHNOLOGY

What the technology is designed to do, where it stops, and how it compares.

06 · 07 · 10

IF YOU APPROVE THE SPEND

Complete-system economics, the gated engagement path and measurable value.

03 · 11 · 13

01	Water has become a production constraint	4
02	A system problem, not a contaminant problem	4
03	The decision lens: complete-system economics	5
04	The M Sciences proposition	6
05	What we bring: the technology portfolio	7
06	What targeted oxidation is designed to do	9
07	Technical boundaries are part of the proposition	10
08	Where we engage — and on what condition	11
09	What differentiation should mean to you	11
10	Choosing the right treatment pathway	12
11	Proof before scale: how an engagement progresses	13
12	What a decision-grade pilot must answer	14
13	Environmental value that survives scrutiny	15
14	A practical starting point	16

Evidence note: this document contains no M Sciences performance statistics. Application-specific claims are released only within the supporting evidence boundary.

EXECUTIVE SUMMARY

Water has moved from a utility line item to a constraint on production, expansion and licence to operate. The change is not that treatment became harder. It is that the cost of treating badly became visible.

Industrial leaders now face the same four demands at once.

PRODUCTION
Protect output
Treatment must not become the constraint on what the site can make.

COMPLIANCE
Meet tightening limits
Discharge and water-quality expectations continue to narrow.

SUPPLY
Reduce freshwater dependence
Water that is more expensive, and less certain to arrive.

ASSETS
Improve what exists
Better economics from treatment assets already built and paid for.

The external direction is not in doubt. The World Bank reports that cities and industries generate nearly one billion cubic metres of used water every day, while potable and industrial reuse still represent only a small share of freshwater withdrawals — and projects that reuse could grow roughly eight-fold by 2040, to about 430 million cubic metres per day, representing up to USD 340 billion of investment. The EPA's Water Reuse Action Plan 2.0 of April 2026 places explicit emphasis on industrial reuse. The revised EU Urban Wastewater Treatment Directive entered into force in January 2025. The UAE targets 95% reuse of treated water by 2036.

This paper argues that the constraint at most sites is not a single contaminant, and not a shortage of treatment capacity. It is the economic and operating consequence of the whole treatment train — and that the correct first move is therefore to establish what the existing system actually costs to run, before evaluating any technology at all.

THE M SCIENCES PROPOSITION

> Do not begin with a technology replacement decision. Begin with the water economics and the actual constraint in the treatment train — then test, in that order. We bring proprietary treatment technology and chemistry, engineered treatment systems, application-specific process design and an emerging patented non-chemical process — and we advance only through controlled baseline, safety, pilot, independent verification and economic gates.

WHAT THIS PAPER DOES NOT CLAIM

This is deliberately not a claim that one technology solves every water problem. Dissolved salts and TDS, metal speciation, transformation products and halide-related by-products require complementary processes or additional analytical controls.

We define that boundary at the outset rather than discover it after investment. Section 07 states the boundaries in full. This paper contains no M Sciences performance statistics: independent laboratory analysis exists from historical trials and demonstrations, held under client confidentiality, but no application-specific result is yet presented as independently verified against a pre-agreed protocol.

01 Water has become a production constraint

Water has moved from a utility line item to a constraint on production, expansion and licence to operate. Three forces are converging.

01

Freshwater cost and certainty

More expensive to buy, and less certain to arrive when the site needs it.

02

Discharge scrutiny

More tightly regulated, more closely monitored, more publicly visible.

03

A changed influent

Assets built for one feed now receive another — more variable, more complex, less biodegradable than the design basis assumed.

> The strategic question is shifting from 'how do we treat this wastewater?' to 'how much productive value can we recover from every cubic metre, while protecting compliance and reliability?'

02 A system problem, not a contaminant problem

A plant can be technically compliant and economically inefficient at the same time. It can also reduce one parameter while quietly shifting cost into membranes, sludge, energy or maintenance — which registers as a success in the laboratory report and a failure in the budget. The correct unit of analysis is the complete water system.

WHAT THE SITE EXPERIENCES	WHAT USUALLY SITS UNDERNEATH	BUSINESS CONSEQUENCE
High or variable organic and colour load	Production variability, difficult compounds, biological process operating outside its design envelope	Chemical burden, process instability, tertiary load, quality risk
Rising water and discharge cost	Scarcity, tariffs, reuse obligations, site expansion	Higher operating cost and a constraint on growth
Treatment capacity bottleneck	Brownfield plant at or near hydraulic or organic limit	Expansion capital and production risk
Membrane and tertiary burden	Upstream treatment not optimised for downstream assets	Cleaning frequency, replacement, energy and downtime
Sludge and residual burden	Treatment chemistry and solids handling interacting badly	Disposal cost, handling burden, environmental exposure
Compliance and stakeholder scrutiny	Tighter permits, reuse requirements, customer and ESG expectation	Licence to operate and reputational risk

A lower reagent price is not automatically a better outcome. Neither is a technically impressive result that produces poor complete-system economics. Either can occur, and either can be expensive.

03 The decision lens: complete-system economics

Most treatment decisions are made on one number — the price of a reagent, or the quotation for a new plant. Neither tells you what the system costs to run. Before evaluating any intervention, establish the following, from measured data.

VALUE POOL	THE QUESTION TO ASK
Freshwater and discharge	Can more water become fit for a defined reuse on this site, and what freshwater or discharge cost does that displace?
Chemicals	What is the total chemical programme, not one line of it?
Energy	Does the intervention change complete-system energy, including downstream assets?
Sludge and residuals	What happens to net solids generation, handling and disposal, on a consistent basis?
Membranes and tertiary	Does upstream performance change cleaning frequency, fouling, replacement or tertiary burden?
Capacity and capital	Can sustained performance defer, resize or avoid a planned expansion — demonstrably?
Reliability	Does it reduce upset risk, downtime or operator intervention, with a defensible financial link?
Compliance	Does the proposed train reliably achieve this site's defined regulatory or reuse endpoint?

WHERE THE VALUE ACCRUES AS LOAD FALLS

Reducing contaminant load is not a single benefit realised at a single threshold. It accrues in steps, and each step is worth something different to a different part of your organisation.

STEP	WHAT IT BUYS	WHY IT MATTERS
High to lower	Discharge cost	Where common effluent treatment is charged on organic load, a lower load lowers the charge.
Lower to lesser	Safety and asset life	Safer handling, and longer service life from downstream membranes where they are installed.
Lesser to least	Compliance	Meeting the discharge limits set by the applicable pollution control authority.
Least to minimal	Reuse and discharge position	Approaching the quality a zero-discharge or high-reuse configuration requires.

Which of these steps is worth paying for is a site question, not a technology question. It depends on how you are charged, what is downstream, and what endpoint you are required to meet.

04 The M Sciences proposition

> Do not begin with a technology replacement decision. Begin with your water economics and the actual constraint in your treatment train — then test, in that order.

We are an applications-led water technology company, focused on improving industrial and decentralised water performance. We bring proprietary treatment technology and chemistry, engineered treatment systems, and application-specific process design.

Our preferred starting point is brownfield: identify a constrained step in a system you already own, determine whether an intervention is technically relevant, and measure the effect on the endpoint and the economics that matter. Where no suitable asset exists, or site conditions favour a different architecture, we configure hybrid, standalone modular or containerised systems instead. Depending on the source-water characteristics, treatment configuration, validated water-quality performance and applicable regulatory requirements, treated water may be suitable for selected non-potable applications, including landscape irrigation, flushing, washing, process mixing or construction use.

WHAT WE BRING	WHY IT MATTERS TO YOU
Proprietary oxidation technology	ANOT® — Advanced Nano Oxidation Technology — evaluated for defined, oxidation-relevant interventions against your contaminants and matrix.
Treatment chemistry	NOXXALL®, the proprietary chemistry in which the technology is supplied, released only for application-specific use.
Engineered systems	Sugofil® treatment plants in conventional and containerised form, supplied and configured as the application requires.
Process integration	S Astra™, a patented electric, non-chemical process integrated into new systems or into an existing biological plant. Laboratory-validated; not yet commercial.
Applications engineering	Dose, contact time, operating window, insertion point and failure envelope. This, rather than the molecule alone, is what makes a result repeatable.
Evidence discipline	Independent baseline, pre-agreed success criteria, third-party verification, and claims that stay inside the evidence boundary.
Water Economics Assessment	A structured diagnostic connecting technical performance to complete-system customer value, and determining whether further testing is justified.
Implementation ecosystem	Local laboratories, fabricators, engineering and domain specialists engaged as projects require, rather than carried as fixed cost.

05 What we bring: the technology portfolio

A water problem is rarely solved by a reagent alone. It is solved by the right technology and chemistry, applied by the right engineered system, integrated at the right point in the train. We supply all of these, we say plainly where each one currently stands, and we will tell you which of them your site actually needs.

ANOT®

The technology

DEPLOYED · INDEPENDENTLY EVALUATED

Advanced Nano Oxidation Technology. Evaluated for defined, oxidation-relevant interventions within a broader treatment train, inside an operating window established for your matrix. Section 06 sets out what it is designed to do, and what it is not.

NOXXALL®

The treatment chemistry

DEPLOYED · INDEPENDENTLY EVALUATED

The proprietary chemistry in which the technology is supplied, for defined water-treatment, oxidation, disinfection and decontamination applications — released only for application-specific use and subject to qualification and evidence.

Sugofil®

Engineered treatment systems

DEPLOYED

Engineered treatment plants in conventional and containerised form, pre-filtration ahead of biological stages, and tertiary and membrane modules. Configured to the application; relocatable; ground-level or rooftop.

S Astra™

Electric, non-chemical treatment process

PATENTED · LAB-VALIDATED · NOT YET COMMERCIAL

A patented multistage process — Indian Patent 590324, granted May 2026 — integrated into new Sugofil systems or into an existing conventional biological plant for treatment betterment. It uses no treatment chemistry.

DEPLOYMENT EXPERIENCE

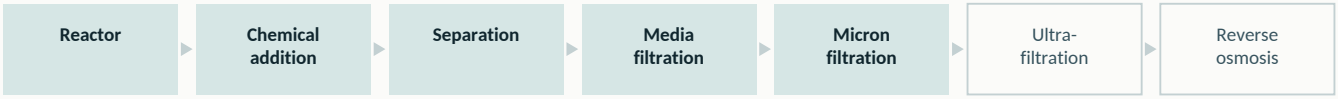
Equipment of this kind has been supplied and operated across a range of matrices and capacities. We describe that experience below by application area and configuration, because that is what it is.

APPLICATION AREA	CONFIGURATIONS SUPPLIED	CAPACITY RANGE
Decentralised STP and reuse	Institutional, healthcare, hospitality and campus sewage; construction-site sewage; ground-level and rooftop modular plants	50 – 200 KL/day
Food and beverage	Protein and fish processing, dairy, brewing, beverage, grain and spice processing effluent	50 – 200 KL/day
Textiles and dyeing	Dye-house effluent, modular batch configuration	50 KL/day

WHAT THIS IS NOT

Deployment experience is not a performance claim, and we do not present it as one. None of these installations has been independently verified against a pre-agreed protocol. They describe matrices we have worked in and configurations we have supplied — not results we have proven. Where a verified result matters to your decision, Section 11 sets out how one is produced.

THE FULL TREATMENT TRAIN — AND WHERE OUR PROCESS ENDS



M SCIENCES PROCESS — SEPARATE TECHNOLOGIES, INTEGRATED DOWNSTREAM

Our process ends at micron filtration. Ultrafiltration and reverse osmosis are distinct technologies with their own expertise requirements. Where an endpoint needs them, they are integrated downstream and we say so — the higher the reuse quality required, the more of the train you are buying. Treated water is not for drinking purposes.

SHARED TREATMENT BUNKS

A concept we are developing, not a network that exists. Where industrial estates lack discharge infrastructure, effluent from several sites could be trucked to a shared treatment bunk and quality treated water returned to water-dependent industries nearby. The same logic applies wherever tankering, common-effluent charges and freshwater purchase stack up against one on-site treatment cost. We are developing this model; we do not present it as operating infrastructure.

06 What targeted oxidation is designed to do

A reasonable question to ask early: what is ANOT actually intended to do? ANOT is being evaluated as a targeted oxidation intervention for defined, oxidation-relevant problems inside a broader treatment train. The objective is not to replace unit operations. It is to establish whether changing a difficult organic fraction, or relieving a specific bottleneck, produces a better downstream outcome that is worth having.

01 INFLUENT / PROCESS PROBLEM

A defined, oxidation-relevant target

Refractory or recalcitrant organics · colour bodies · biological inhibition · emulsified FOG · a named oxidisable species identified at your site.

02 TARGETED OXIDATION INTERVENTION

ANOT within an application-specific operating window

Dose, contact time, pH and redox range, insertion point and failure envelope — established for your matrix, not carried over from another site.

03 SYSTEM EFFECT TO TEST

The hypothesis that has to survive measurement

Transformation or degradation of the defined target, and whether that delivers biological preconditioning, polishing or reduced downstream burden — where demonstrated at your site.

04 BUSINESS ENDPOINT

The only outcome that settles the decision

Reuse, released capacity, operating reliability or treatment economics — measured against your own baseline, and claimed only where demonstrated.

None of these outcomes is claimed as generally proven. Each is a hypothesis about your site until an independent baseline and controlled dose-response testing establish otherwise. Section 11 sets out how a claim earns the right to be made.

TWO CANDIDATE INTEGRATION POINTS

A Pre-biological

Dosed ahead of aeration, or inline on the transfer line. Target: oxidisable organic load, colour and emulsified FOG entering biology.

B Post-biological polishing

Applied to secondary effluent, ahead of tertiary. Target: residual colour, odour and oxidisable organics limiting reuse.

Which point applies at your site — or whether neither does — is established by assessment and controlled testing, never by assumption.

WHAT IT IS NOT

ANOT is not desalination. It is not generic dissolved-metals removal. It is not a universal disinfectant. And it is not a replacement for every STP or ETP process.

07 Technical boundaries are part of the proposition

Credible innovation requires explicit limits. We treat these as design inputs, not as fine print, because a boundary discovered after investment is far more expensive than one stated at the outset.

BOUNDARY	OUR POSITION
TDS and dissolved salts	Oxidation can target defined organic and colour problems. Dissolved salts remain a separate treatment-train consideration, addressed by membrane or evaporative processes.
Dissolved metals	Metal-specific applications require a defined mechanism, speciation data and evidence. We make no generic dissolved-metals claim.
Energy	Any energy effect must be measured at complete-system level for the defined application, not asserted as an intrinsic property.
Sludge	Any sludge or disposal effect must be measured on a consistent net basis.
Tanneries and chromium	Chrome-bearing applications remain behind independent Cr(III)/Cr(VI) speciation and safety gates. No commercial pilot proceeds before that gate is passed. Speciation is not removal: demonstrating conversion of hexavalent to trivalent chromium is not by itself evidence that total chromium has been removed, or that treated water is suitable for a given reuse or discharge.
Mining	Applications are qualified by named contaminant, matrix and treatment-train role — never by the word 'mining'.
Pharmaceuticals and specialty chemicals	Relevant transformation products and residuals are defined before any pilot. Removal of a parent compound is not evidence of safety.
Halide-rich streams	Oxidation by-product risk is assessed where chemically appropriate.
Where our process ends	Our process ends at micron filtration. Ultrafiltration and reverse osmosis are separate technologies with their own expertise requirements, integrated downstream where the endpoint requires them. We say which part of the train we are.
Equipment performance	Capacity, footprint, installation time and configuration are specifications, and we state them as such. Reductions in operating cost, footprint, chemical consumption or sludge are performance claims, and they pass the same evidence gates as any chemistry claim.
Safety and commercial pressure	A safety or toxicity failure stops the work regardless of commercial attractiveness, schedule or the origin of the pressure to continue.

THE SINGLE BOUNDARY THAT MATTERS MOST

Advanced oxidation degrades susceptible compounds. It does not remove dissolved salts, TDS or most dissolved metals. Where those are your binding constraint, membrane, evaporative, precipitation or ion-exchange processes remain necessary. A hybrid train may still create substantial value — but the value comes from the combination, and we will say which part we are.

> There is no single treatment that addresses every parameter. Every technology has its merits and its limitations. We bring high toxic to low, low to lower, lower to least — and which of those is achievable depends on the effluent in front of us.

A vendor who cannot tell you what their technology does not do has not yet found out.

Where a boundary above is your binding constraint, the correct answer is another unit operation — membrane, evaporative, precipitation, adsorption or ion exchange. We position alongside those processes, never instead of them, and we would rather establish that at assessment than after you have paid for a pilot.

08 Where we engage — and on what condition

Our opportunity universe is international. Validation is deliberately selective, so that evidence quality and applications-engineering capacity are not diluted across too many matrices at once. An application area can be strategically attractive without being an active validation programme, and we would rather tell you which is which.

APPLICATION AREA	ENGAGEMENT POSTURE	WHAT GOVERNS PROGRESSION
Decentralised STP and industrial reuse	Validating	A defined reuse endpoint and a representative independent baseline
Textiles and dyeing	Validating	Organics and colour separated explicitly from TDS and salt management
Food and beverage	Validating	Matrix variability, hygiene endpoint and complete-system reuse economics
Refining and petrochemicals	Selective	Selective — strict matrix, safety, by-product and evidence gates
Pharmaceuticals and specialty chemicals	Selective	Compound-specific validation and transformation-product discipline
Tanneries and leather	Controlled laboratory evaluation only	Independent chromium speciation and safety gate before any commercial pilot
Mining and metals	Named contaminant only	A named contaminant, circuit and mechanism. The word 'mining' is not an application definition

A narrow validation portfolio is not a narrow market. It is what protects the quality of the answer you receive.

How we deploy is decided by the site, not by preference. A targeted intervention inside your existing train is our usual starting point and the subject of this paper. Where a site has no suitable asset, or where the constraint is space, mobility or the absence of discharge infrastructure, we also supply hybrid configurations alongside existing plant, and standalone modular and containerised systems. Which of the three applies is established by site assessment and treatability study.

09 What differentiation should mean to you

We do not claim there is no competition. You already have several ways to address a water problem, and several of them are mature, well-evidenced and well-supported. The relevant question is narrower and more useful: can we create a superior outcome for a defined use case at your site? The table below states what would have to be true before each claim is made.

POTENTIAL DIFFERENTIATION	WHAT MUST BE PROVEN BEFORE WE CLAIM IT
Brownfield retrofit fit	Demonstrated integration with manageable disruption and a clearly defined treatment-train role.
Complete-system economics	Measured customer value on a whole-system basis, not an isolated chemical-cost comparison.
Application know-how	Repeatable matrix-specific operating windows, boundaries and documented failure modes.
Recurring model	Reliable supply and attractive lifetime economics for both parties.
Evidence discipline	Independent verification, and claims limited to what the data support.
Scalable delivery	Local implementation capability without losing formulation, applications or evidence control.

10 Choosing the right treatment pathway

The purpose of comparison is not to declare a universal winner. It is to identify the mechanism that best fits your binding constraint, your endpoint and your economics. We select against that constraint, and the table below is the basis on which we do it.

PATHWAY	TYPICAL ROLE	WHAT DETERMINES FIT
Biological treatment	Biodegradable organic removal	Biodegradability, toxicity and inhibition, load, hydraulic and organic design envelope
Coagulation and precipitation	Suspended and colloidal matter; selected metals	Chemistry, pH, sludge generation and disposal route
Activated carbon and adsorption	Polishing and adsorption of selected organics	Adsorption affinity, media life, regeneration and disposal
Membranes and evaporation	Separation, reuse, TDS management	Fouling, recovery, energy, concentrate handling and end-use quality
Ozone and UV-based advanced oxidation	Oxidation of susceptible compounds	Target compounds, matrix demand, energy, equipment and by-products
Fenton-type chemistry	Chemical oxidation	pH, iron and sludge burden, reagent handling and downstream implications
Electrochemical approaches	Oxidation and electrochemical treatment	Conductivity, energy, electrode and reactor economics, by-products
ANOT as a targeted oxidation candidate	Targeted brownfield oxidation	Named target, matrix fit, dose, contact time, insertion point, downstream value and complete-system economics

> If a competing treatment train produces the required endpoint more safely, more reliably or more economically, you should choose it. Our task is to demonstrate where our proposition earns the right to be selected — not to assert that it always does.

The practical implication. We enter the conversation when oxidation is mechanistically relevant, and when a targeted intervention could improve the economics or the performance of your complete treatment train.

WHEN WE STOP

We leave the conversation early when your binding problem is primarily dissolved salts, generic metals removal, inadequate solids separation, or another mechanism outside our evidence boundary. Saying so at the first meeting costs us an opportunity. Discovering it after a pilot costs you a year.

11 Proof before scale: how an engagement progresses

The principle is simple: spend technical and customer capital only once the previous question has been answered. Every stage has an output, a commercial condition and a legitimate way to stop.

STAGE	WHAT HAPPENS	DECISION OUTPUT
1 · Screen	Define the problem, process, treatment train, target endpoint and stakeholder path.	Is there a plausible application at all?
2 · Water Economics Assessment	Collect baseline water, chemical, energy, sludge, maintenance, capacity and reuse data. Independent sampling.	Where is the value pool, and how large?
3 · Technical qualification	Evaluate mechanism fit, safety and claims, and delivery and economic feasibility.	Pass, hold or kill — before scarce pilot effort is spent.
4 · Controlled lab or pilot	Test pre-agreed dose and operating variables, with controls and success criteria fixed in advance.	Does it perform safely and repeatably?
5 · Independent verification	Third-party analysis under the agreed protocol. Deviations and negative results preserved.	What can actually be claimed?
6 · Business case	Compare complete-system current state against complete-system proposed state.	Does the value justify conversion?
7 · Deployment and replication	Define scope, responsibilities, consumables, implementation and acceptance.	Can this transfer to the next line or site?

> A high-quality assessment that concludes 'do not pilot' protects your capital and our credibility. It is a legitimate outcome, and can be more valuable than proceeding with the wrong pilot.

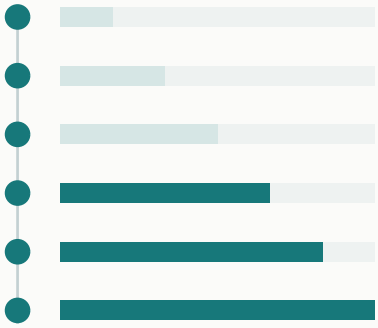
HOW A CLAIM MATURES

External claims expand only as evidence expands. We state where each application currently sits on this ladder, and we do not borrow confidence from a rung we have not reached. Independent laboratory analysis has been conducted across trials and demonstrations in diverse industries; those reports carry client, site and raw effluent data, are held under confidentiality agreements, and are not published or reused without written consent.

NOXXALL has been evaluated by the Department of Chemical Engineering, Indian Institute of Science, Bengaluru, under a consultancy covering biotoxicology, formulation toxicity, heavy-metal content, material safety data and industrial applications. Trial testing was earlier conducted at the Department of Environmental Science, Bangalore University. That work addresses the technology and the chemistry. It is not evidence of performance at your site — which is what the ladder below is for.

The Indian Institute of Science evaluation records that “existing conventional treatment methods can be easily converted to the new technology without much change in the capital requirement” — an independent view of the brownfield route this paper argues for.

Both evaluations were conducted under the company's former name, Ozo Nano Sciences.



Hypothesis / design intent
Mechanism argument only. Not a claim.

Controlled laboratory evidence
Dose-response with controls, in our own or a partner laboratory.

Independent laboratory verification
Accredited third party, protocol agreed in writing beforehand.

Site pilot
Your matrix, your variability, pre-agreed success and kill criteria.

Replication
Repeat performance across operators and conditions.

Commercial-scale evidence
Sustained operation, and only then a referenceable case.

12 What a decision-grade pilot must answer

A pilot that cannot define the commercial decision before dosing begins is not ready to start. Before we test at your site, both parties agree in writing what would constitute success, and what would stop the work.

01	Does the intervention achieve the pre-agreed endpoint against a representative baseline — not a best-case day?
02	Is the result reproducible across realistic matrix variability, and across a change of operator?
03	Are residual, transformation-product, speciation and by-product risks characterised for this matrix?
04	Does it integrate with the existing train without unacceptable downstream burden?
05	What happens to complete-system water, chemical, energy, sludge, tertiary and maintenance economics?
06	What operating window, monitoring and field controls does it require in practice?
07	Can it be delivered on commercial terms that work for both parties?
08	What is supported by independent evidence — and what remains unknown?

HOW PARAMETER ASSURANCES ARE ISSUED

A laboratory result from a grab sample is indicative, not representative. Effluent varies with the day, the shift and the operating condition, so a single analysis should not be treated as evidence of continuous plant performance.

WHAT WE WILL NOT PUBLISH

Parameter assurances — the inlet and outlet relationships we will commit to — are issued with a quotation, following treatability qualification on your effluent. We do not publish them in advance, because an assurance that has not been qualified against your matrix, flow and operating conditions is not an assurance. Treated water is not for drinking purposes.

13 Environmental value that survives scrutiny

Environmental value is strongest when it is tied to a measurable operating outcome. Depending on the application, a successful intervention may support freshwater conservation, increased fit-for-purpose reuse, lower pollutant discharge, reduced residual burden, or the avoidance of asset expansion that would otherwise have been built. Each of those is a real environmental benefit and each is also, in the right circumstances, a line in an operating budget.

MEASURABLE VALUE	WHAT WE ESTABLISH
Water	Freshwater avoided, reuse enabled and discharge reduced, measured as volume actually displaced.
Residuals	Net sludge, concentrate and disposal effect, on a consistent moisture and classification basis.
Energy	Complete-system energy delta including downstream assets — never an intrinsic claim.
Capacity	Debottlenecking, or demonstrable deferral of capital that would otherwise have been committed.
Reliability	Measurable effect on upset frequency, downtime and operator intervention.
Compliance and environmental outcome	A defined endpoint achieved under documented analytical conditions.

The sequence matters. These benefits are quantified only after the underlying technical effect has been established — not estimated in advance and then defended. A sustainability claim that cannot survive the same scrutiny as a performance claim is a liability in a disclosure regime that is tightening every year.

> We expect every environmental claim to explain not only the result achieved, but the conditions under which it was achieved, the analytical basis, the limitations, and the controls used to protect safety.

That discipline is what makes an environmental claim usable in mandatory reporting, in a customer audit, or in front of a regulator. It is also what distinguishes a credible supplier from an enthusiastic one.

14 A practical starting point

The most useful first conversation is about your site, not our product. It usually needs no more than the following.

BRING TO THE DISCUSSION	WHY IT MATTERS
Treatment-train diagram and known bottleneck	Identifies the real intervention point.
Representative water-quality data	Defines mechanism relevance and analytical requirements.
Flow and production variability	Determines representativeness and scale.
Current chemical, energy, sludge and maintenance burden	Creates the economic baseline.
Freshwater, discharge and reuse economics	Quantifies the water value pool.
Target regulatory or reuse endpoint	Defines what success means at this site.
Known salts, metals, halides, solvents or process additives	Supports the safety and boundary assessment.
Planned capacity expansion or asset constraint	Identifies potential capital value.

CONCLUSION

The next generation of industrial water improvement will not be won on technology claims. It will be won by solutions that fit real treatment trains and real site constraints, survive independent scrutiny, create measurable complete-system value, and can be translated from controlled evidence into safe, repeatable operating practice. ANOT is the enabling innovation; the proposition is disciplined water-performance improvement.

Select one site and one defined water problem. Establish the baseline. Advance only if the evidence and the economics support it.

START THE CONVERSATION

M Sciences
Zefa, 29th Floor, Phoenix Kessaku, 1 Dr. Rajkumar Road, Rajajinagar, Bengaluru 560010
www.anotmagic.com
askus@anotmagic.com · +91-98450-16035

SELECTED EXTERNAL CONTEXT

These are policy, strategy and good-practice references, cited as context for the direction of travel. They are not effluent standards. The governing requirement at any site is set by the applicable local pollution control authority.

— World Bank Group (2025). Scaling Water Reuse: A Tipping Point for Municipal and Industrial Use.
International good practice and reference framework
worldbank.org/en/topic/water/publication/scaling-water-reuse

— U.S. Environmental Protection Agency (2026). Water Reuse Action Plan 2.0, April 2026.
US water-reuse policy framework — not an effluent limit
epa.gov/waterreuse/water-reuse-action-plan-20

— European Commission. Revised Urban Wastewater Treatment Directive, in force January 2025.
EU legislation on urban wastewater — not an industrial-effluent standard
environment.ec.europa.eu/topics/water/urban-wastewater_en

— Government of the United Arab Emirates. UAE Water Security Strategy 2036.
National strategy target — not a facility-level legal requirement
u.ae/en/about-the-uae/strategies-plans-and-visions/environment-and-energy

— UN-Water (2024). Progress on Wastewater Treatment — 2024 Update.
International policy and evidence context
unwater.org/publications/progress-wastewater-treatment-2024-update

— Central Pollution Control Board (India). National inventory of sewage treatment plants.
Indian regulatory and technical context, where applicable
cpcb.nic.in

Evidence note: this document contains no M Sciences performance statistics. Application-specific claims are released only within the supporting evidence boundary.