

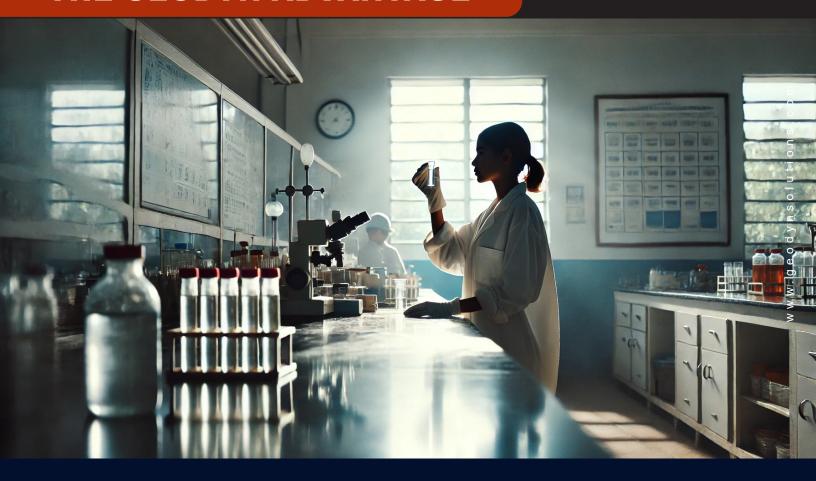
PROPRIETARY MICROBIAL BIOTECHNOLOGY FOR ADVANCED WASTEWATER TREATMENT AND RESOURCE RECOVERY



At Geodyn Solutions, we are redefining wastewater treatment through our proprietary microbial biotechnology platform—offering municipalities, industries, and agricultural sectors a smarter, cleaner, and more sustainable way to manage wastewater. Our integrated microbial solutions are engineered to not only purify water but to extract valuable resources, enhance energy efficiency, and support environmental stewardship at every level of the treatment process.

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THE GEODYN ADVANTAGE



Our cutting-edge microbial formulations are composed of selectively enhanced microbial strains, enzymes, and organic catalysts designed for maximum biodegradation of complex pollutants. These technologies outperform conventional systems by accelerating biological treatment, reducing operational costs, and eliminating the need for excessive chemical inputs. With Geodyn, wastewater becomes an opportunity—not a burden.

CORE PROPRIETARY TECHNOLOGIES

ADVANCED NUTRIENT REMOVAL (ANR)

Geodyn's microbial solutions target nitrogen and phosphorus with precision. Using enhanced biological nitrification-denitrification and phosphorus uptake mechanisms, our systems prevent harmful algal blooms and restore water body health. Unlike traditional treatments, our microbes adapt to a range of influent compositions and work under low-energy conditions, increasing reliability and sustainability.

ENERGY-PRODUCING ANAEROBIC DIGESTION

Our proprietary anaerobic consortia are designed for high-yield biogas production. These specialized microbial blends convert organic sludge into methane, enabling wastewater plants to become net-zero energy facilities. Our systems reduce waste volume, lower GHG emissions, and support renewable energy goals—all while cutting operational costs.

TARGETED BIOAUGMENTATION FOR INDUSTRIAL WASTE

Geodyn's targeted microbial packages are customized to tackle site-specific challenges—such as oil and grease, hydrocarbons, pharmaceutical residues, heavy metals, or chemical waste. Through bioaugmentation, we introduce high-performance microbial agents that dramatically increase pollutant breakdown efficiency and reduce retention time in treatment systems.

NUTRIENT AND RESOURCE RECOVERY

Geodyn doesn't stop at waste removal—we engineer recovery. Our microbial formulations facilitate the biological extraction of phosphorus, nitrogen, and carbon in forms that can be reused as agricultural inputs. We also promote biosolid stabilization, enabling the safe and beneficial reuse of sludge as fertilizer or soil conditioner.

IMPLEMENTATION STRATEGY

Geodyn Solutions partners with cities, industrial facilities, and developers to deploy tailored wastewater treatment programs. Our structured process includes:

- **Site Evaluation:** In-depth wastewater analysis, infrastructure assessment, and treatment goal alignment.
- Custom Formulation: Development of microbial solutions designed for site-specific pollutant profiles and environmental conditions.
- Pilot Integration: Small-scale testing and validation of performance before full implementation.
- Deployment and Monitoring:
 Seamless integration with existing
 infrastructure and ongoing data-driven
 performance optimization.





ENVIRONMENTAL AND FINANCIAL BENEFITS

- Reduced use of chemicals and energy
- Minimized sludge generation and disposal costs
- Biogas generation and energy offsetting
- Recovered nutrients for agricultural use
- Enhanced compliance with environmental regulations
- Improved long-term return on investment (ROI)

Geodyn's solutions are ideal for both developing regions in need of robust, low-cost treatment and advanced municipalities striving for smart city status with circular resource flows.

PROVEN PERFORMANCE, SCALABLE INNOVATION

Geodyn Solutions delivers advanced, real-world microbial technology for a variety of wastewater streams—municipal, industrial, agricultural, and even decentralized systems. Our technology is scalable from rural communities to megacities, providing resilience in the face of increasing population growth, urbanization, and climate pressure.

Whether you are upgrading a conventional system, designing a new plant, or seeking ways to reduce carbon emissions and increase resource recovery, Geodyn's microbial treatment technology is the sustainable path forward.









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