

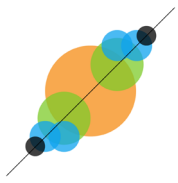


Renewable Energy, Water & Sustainable Infrastructure Advisory

STRATEGIC DESIGN • ENGINEERING • ADVISORY • PROJECT DEVELOPMENT

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Executive Summary

Phaenoran provides strategic consulting, technical advisory, engineering design, and project development services across renewable energy, water desalination, sustainable infrastructure, and industrial digitalization.

Our objective is to help governments, utilities, industrial groups, infrastructure developers, investors, and EPC organizations successfully conceptualize, evaluate, engineer, optimize, and implement high-impact sustainability projects.

Backed by decades of international project execution experience and deep technical leadership, Phaenoran bridges:

- Strategic vision and engineering execution
- Innovation and operational practicality
- Technology selection and financial viability
- Infrastructure scale-up and sustainable outcomes

Our consulting practice combines:

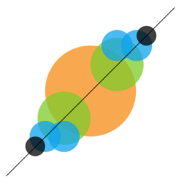
- Technical expertise
- Project commercialization understanding
- Global execution experience
- System integration capabilities
- Long-term operational perspective

About Phaenoran

Phaenoran is a consulting and engineering advisory brand focused on next-generation infrastructure solutions for a rapidly evolving energy and water landscape.

We support clients through the complete lifecycle of sustainable infrastructure initiatives:

1. Feasibility & Concept Development
2. Technical Advisory & Engineering Review
3. Technology Evaluation & Selection
4. System Architecture & Integration
5. Project Development Support
6. EPC Advisory & Technical Oversight
7. Digital Monitoring & Optimization
8. Operational Efficiency Enhancement



We work across:

- Renewable Energy
- Desalination & Water Treatment
- Hydrogen & Fuel Cells
- Energy Storage Systems
- Industrial Automation
- Smart Monitoring Platforms
- Sustainability & Decarbonization Programs

Our Core Areas of Expertise

Renewable Energy

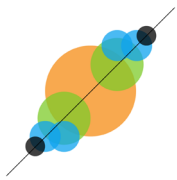
- Utility-scale solar PV systems
- Distributed solar systems
- Hybrid renewable energy systems
- Solar thermal systems
- Renewable integration studies
- Grid optimization support
- Energy yield analysis
- Plant performance enhancement

Water & Desalination

- Seawater desalination
- Brackish water treatment
- Industrial wastewater recovery
- Water-from-air systems
- Water sustainability planning
- Energy-efficient desalination strategies
- Remote and off-grid water solutions

Hydrogen & Clean Energy

- Hydrogen ecosystem advisory
- Fuel cell systems
- Green hydrogen infrastructure planning
- Renewable-powered hydrogen systems
- Energy transition strategy support



Energy Storage

- Battery energy storage systems (BESS)
- Hybrid storage architecture
- Renewable + storage optimization
- Energy reliability enhancement
- Peak management strategies

Industrial Digitalization

- SCADA systems
- Remote monitoring systems
- IoT-based infrastructure monitoring
- Data acquisition systems
- Predictive monitoring frameworks
- Smart utility systems

[What Differentiates Phaenoran](#)

Integrated Engineering Perspective

We combine strategic consulting with real-world engineering implementation experience.

Global Project Exposure

Our leadership team has supported projects across Asia, Africa, Europe, the Middle East, and North America.

Technology-Neutral Advisory

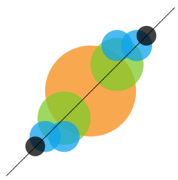
We focus on selecting the right solution for the client rather than pushing a specific technology or vendor.

Execution-Oriented Consulting

Our recommendations are grounded in constructability, scalability, operational practicality, and long-term sustainability.

Cross-Disciplinary Expertise

We integrate renewable energy, water systems, digital infrastructure, automation, and industrial engineering into unified solutions.



Leadership Profile

Dr. Milind Upadhye – CTO & Lead Technical & Strategic Advisor



Dr. Milind Upadhye brings over three decades of international experience in renewable energy systems, electronics, industrial automation, desalination technologies, and sustainable infrastructure development. Dr. Upadhye has a bachelor’s degree in physics and a master’s in Electronic Instrumentation. His doctoral Ph.D research was in Solar Tower Helio-static Mirror Drive Systems.

His expertise spans:

- Renewable energy engineering
- Solar photovoltaic systems
- Solar thermal systems
- Hydrogen fuel cells
- Water desalination technologies
- SCADA and industrial automation
- Electronics product development
- Remote monitoring systems
- IoT infrastructure

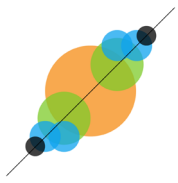
Global Project Experience

Dr. Upadhye and associated teams have contributed to the development, engineering, and implementation of over:

- 950 MW of solar photovoltaic projects globally
- 2,500+ industrial and infrastructure installations worldwide

Project exposure includes:

- | | |
|---------|------------|
| • India | • Zimbabwe |
| • Japan | • Germany |



- Tunisia
- Mexico
- Guinea
- Mauritania
- Madagascar
- Saudi Arabia
- USA
- Senegal
- France
- Cambodia
- Malaysia
- Mozambique
- Sao Tome

Additional Leadership Experience

- Technical Director – Prengy LLC (USA)
- Former Digital Circuit Designer – JVC Semiconductor Laboratory, Japan
- Former Manager R&D – Onida TV
- Research contributor on solar interference studies during solar eclipse research in collaboration with Boscha Observatory, Indonesia

Contributions to Science & Engineering

- Award-winning electronics innovator
- Published technical articles
- Science educator and lecturer
- Contributor to science communication and astronomy outreach

Mr. Vaibhav Gupta – CEO Phaenoran

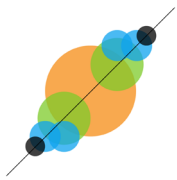
Vaibhav Gupta is a business leader, infrastructure strategist, and growth-oriented executive with extensive experience across renewable energy, logistics, real estate development, strategic investments, and multi-sector business operations.

His leadership combines entrepreneurial execution, infrastructure development expertise, commercial strategy, and long-term investment thinking — enabling organizations to align technical infrastructure initiatives with commercially viable and scalable growth strategies.

With exposure across Europe, the United States, and Asia, Vaibhav brings a globally informed perspective to infrastructure development, sustainability initiatives, investment planning, and business expansion.

Multi-Sector Leadership Experience

Over the years, Vaibhav has successfully developed and expanded multiple business verticals across renewable energy, infrastructure, logistics, land development, and strategic investments.



His leadership portfolio includes:

Renewable Energy Development

- Founded and expanded renewable energy initiatives with solar projects across India
- Supported the development and commercialization of sustainable energy opportunities
- Experience in project evaluation, strategic growth planning, and renewable infrastructure development
- Strong understanding of commercial deployment considerations for renewable projects

Infrastructure & Land Development

- Led strategic land banking initiatives with successful exits in India
- Developed mixed-use properties in emerging and high-growth corridors
- Experience in infrastructure-linked urban expansion opportunities
- Strong exposure to land strategy, investment evaluation, and development planning

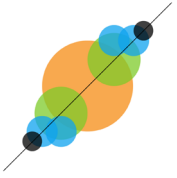
Strategic & Commercial Advisory Strengths

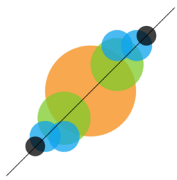
Vaibhav contributes a strong commercial and business development perspective to Phaenoran's consulting and advisory capabilities. His expertise includes:

- Infrastructure investment strategy
- Renewable energy commercialization
- Project development and expansion strategy
- Land aggregation and infrastructure planning
- Business scaling and operational growth
- Commercial feasibility assessment
- Strategic partnerships and stakeholder alignment
- Long-term investment evaluation
- Market positioning and business ecosystem development

His ability to bridge business strategy with infrastructure execution provides clients with a balanced perspective that integrates:

- Commercial practicality
- Growth scalability
- Investment viability
- Long-term sustainability
- Strategic execution alignment





D&C Services

Advisory & Consulting

- Technical due diligence
- Feasibility studies
- Technology assessments
- Project risk analysis
- Infrastructure modernization strategy
- Sustainability roadmap development
- Decarbonization advisory
- Energy transition planning

Engineering Support

- System conceptualization
- Preliminary engineering
- Design optimization
- Integration engineering
- Technical specification preparation
- Vendor technical evaluation
- EPC coordination support

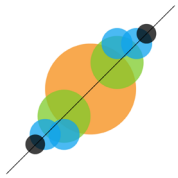
Operational Optimization

- Plant performance analysis
- Remote monitoring integration
- SCADA modernization
- Operational efficiency enhancement
- Data-driven maintenance planning
- Reliability improvement

Industries We Serve

Public Sector & Utilities

- Municipal water authorities
- Smart city programs
- Renewable energy agencies
- Utility modernization initiatives



Industrial & Manufacturing

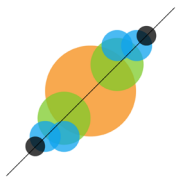
- Industrial utilities
- Process industries
- Heavy manufacturing
- Energy-intensive operations

Infrastructure Developers

- Renewable developers
- EPC companies
- Infrastructure investment groups
- Industrial park developers

Commercial & Institutional

- Campuses
- Data centers
- Large commercial facilities
- Hospitality infrastructure
- Sustainability-driven enterprises



Approach

Discovery & Assessment

Understanding the client’s operational, commercial, environmental, and technical objectives.

Feasibility & Solution Design

Developing technically viable and commercially practical solution pathways.

Technology Evaluation

Assessing technologies based on efficiency, scalability, lifecycle cost, maintainability, and regional suitability.

Engineering & Integration

Creating integrated frameworks that align energy, water, automation, and operational systems.

Implementation Support

Supporting project teams through vendor evaluation, deployment planning, and execution oversight.

Monitoring & Optimization

Enabling long-term performance through digital systems, monitoring, analytics, and operational improvements.

Potential Engagement Models

Strategic Advisory

Executive-level guidance for energy, water, and sustainability programs.

Technical Consulting

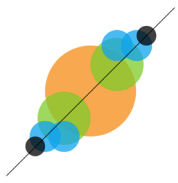
Detailed engineering and infrastructure consulting for ongoing or planned projects.

Owner’s Engineering Support

Independent technical representation during project execution.

Technology Evaluation & Validation

Assessment of emerging technologies, vendors, and deployment strategies.



Project Development Support

Support for feasibility, funding readiness, technical documentation, and implementation planning.

Sustainability & Impact Focus

Phaenoran's consulting philosophy is built around long-term sustainability, resilience, and measurable operational value.

Our solutions focus on:

- Energy efficiency
- Water security
- Infrastructure resilience
- Carbon reduction
- Digital transformation
- Resource optimization
- Sustainable industrial growth

Why Clients Engage With Us

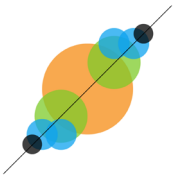
Clients engage Phaenoran for:

- Deep technical credibility
- Multi-disciplinary engineering expertise
- Global execution perspective
- Practical implementation knowledge
- Independent technology evaluation
- Strong systems integration capability
- Long-term operational thinking
- Innovation combined with engineering rigor

Sample Client Discussion Areas

We support clients evaluating opportunities such as:

- Utility-scale renewable projects
- Renewable + desalination integration
- Industrial decarbonization
- Water scarcity mitigation



- Smart infrastructure modernization
- Remote infrastructure monitoring
- Hybrid energy systems
- Hydrogen readiness planning
- Energy storage integration
- Sustainable infrastructure expansion

Phaenoran

Strategic Engineering & Sustainable Infrastructure Advisory

We welcome the opportunity to collaborate with organizations seeking practical, innovative, and scalable solutions across renewable energy, desalination, clean technologies, and smart infrastructure.