

QUADRANTE

Waste

2026



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Strong Power-Houses Join Together

QUADRANTE



+ 1.500	+ 140M €	37	23
People	Revenues	Offices	Countries



About us

In a world where progress often clashes with nature, we embrace our purpose by always leading engineering and architecture projects with its Total Design approach, seeking economically optimised, sustainable solutions of technical excellence. It is centred on our mission. **Designing. Delivering. Adding Value.**

We have proudly assumed a leading position in the Portuguese market through continuous work and dedication, becoming a multinational company in a world that constantly presents us with considerable, complex challenges.

Our approach is not limited to complying with standards; we think beyond them. We are agents of change in the world. We are Quadrante.

Our purpose

To partner with our clients in creating and building sustainable, responsible and long-lasting infrastructures for a better world.

As a multidisciplinary consultancy and design group in Engineering, Architecture, Environment and Sustainability, we take a holistic view of the construction sector and pursue an integrated and evolving approach to sustainability.

Our guiding values are based on the future, professionalism, ethics and flexibility. Through these values, we endeavour to attract and nurture talent, giving them unique opportunities for development.

Sectors we work in

Energy

Powering the zero-emission

Mobility

Driving a smarter and more connected future

Sustainable Cities

Designing environments for better living



Our Key Services

At Quadrante, [we develop sustainable solutions in the waste sector that create value for our clients](#), improve the quality of life in communities, and strengthen the resilience of territories. With a multidisciplinary approach that integrates Engineering, Environment, and Sustainability, we stand out for our technical excellence, innovation, and close client relationships. We support the entire project cycle — from feasibility studies to detailed design and construction management.

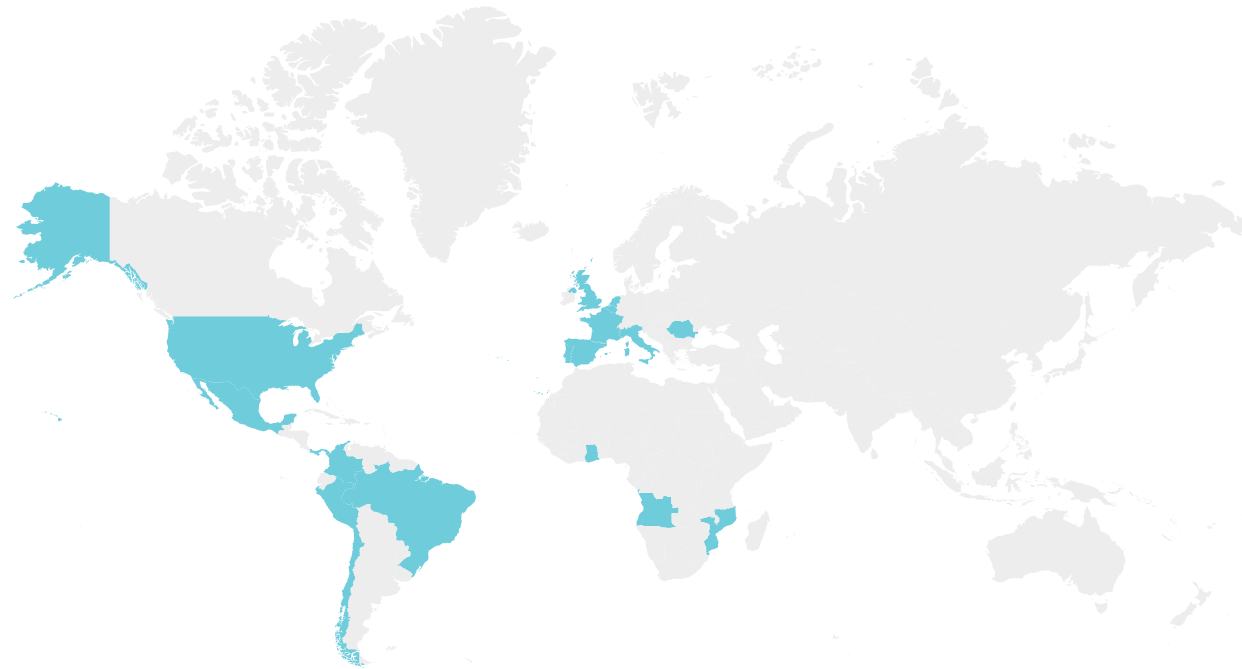
We work side by side with our clients to ensure effective solutions, tailored to each context and delivering lasting impact. We have experience in both traditional and innovative delivery models, such as Design-Build and Public-Private Partnerships, contributing to the efficient management of resources, financing, and asset performance. Our main areas of expertise include:

- › **Waste Management** - Integrated, secure and resilient systems for waste management, including collection, transport, storage, treatment and valorisation, adapted to international and local needs and regulatory requirements.
- › **Waste-to-Energy** - Projects that enable the development of innovative solutions, promotes environmental sustainability, optimizes resource use, and creates lasting, competitive value for clients and communities.
- › **Planing** - Local, national, and global strategies, and plans that range from collection to valorisation, putting together the best practices and also the best references worldwide supporting ESG targets, and benefiting the populations and the environment.
- › **Studies and Licensing** - Environmental Impact Studies, studies of major constraints and development of mitigating measures; With vast international experience and in-depth knowledge of the realities of populations and their surroundings, projects are designed with a focus on sustainable development.

At Quadrante we face the waste as a driver for circular economy and we can improve the lives of people, not forgetting the nature, designing and planning infrastructures that benefit from our experience and knowledge, taking into consideration local expertise and conditions, hearing the populations and innovating with them, in close collaboration with our clients, but thinking globally, after all, it is our duty to plan local and act global. That is why we create strong, intelligent, and sustainable solutions.

Our projects are developed globally, but our main geographies, have been Europe and Middle East and Africa, where a diverse experience has been earned and results have been awarded, which give us confidence and readiness for projects and services allover the world.

Our presence



Our Projects

- › Angola
- › Saudi Arabia
- › Algeria
- › Barbados
- › Brazil
- › Burkina Faso
- › Chile
- › China
- › Ivory Coast
- › Spain
- › Gambia
- › Ghana
- › Equatorial Guinea
- › Honduras
- › Kenya
- › Libya
- › Malawi
- › Mozambique
- › Nigeria
- › Panamá
- › Peru
- › Portugal
- › São Tomé and Príncipe
- › Saint Martin
- › Sierra Leone
- › Tanzania
- › Uganda
- › Zimbabwe

Our key numbers

+5000
Projects in Total

+ 450 MW
Energy
production

+450
International
Projects

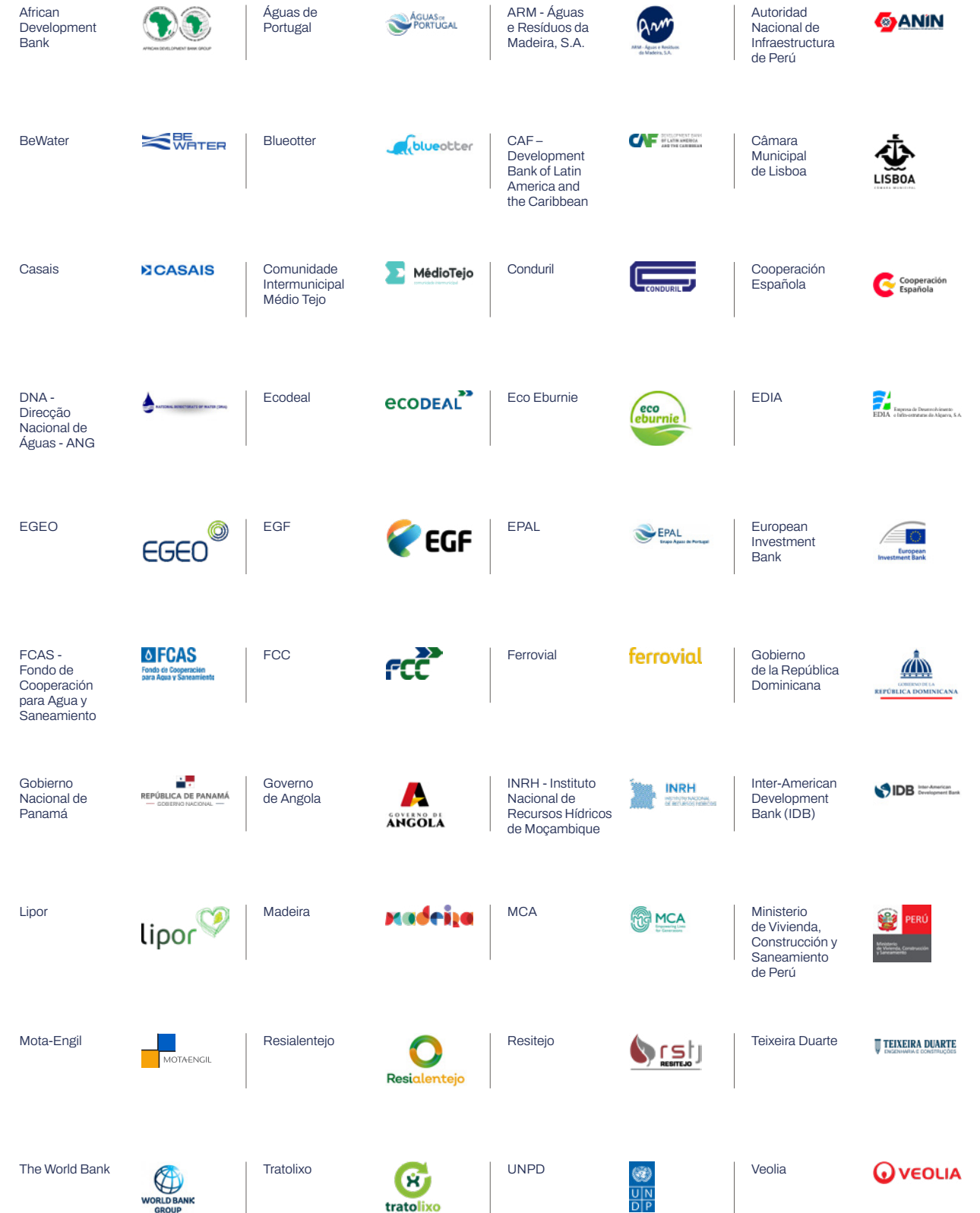
+ 4 millions
Irrigation area

+ 300
Clients Globally

+ 12 millions
Population
with access
to potable water

+ 10 millions
Population
with access
to sanitation

Our Main Clients



Waste Management



*Waste infrastructure engineered for today's needs
and tomorrow's challenges*

Waste Management



Quadrante delivers integrated and future-ready **waste management solutions** designed to ensure universal access to reliable waste management and environment protection, in full alignment with public health priorities and sustainability goals.

Our work addresses critical challenges including population growth, rapid urbanization, climate change, and aging infrastructure.

We support public and private sector clients across the entire project lifecycle, from strategic planning and feasibility assessments to detailed design, construction supervision, and performance optimization.

By combining engineering excellence with digital innovation, we ensure regulatory compliance, efficient resource use, and strong environmental stewardship. Our customized solutions serve both centralized and decentralized systems and are tailored to the specific needs of rural, urban, and peri-urban environments.

Through smart infrastructure, proactive asset management, and community engagement, we help build inclusive, resilient, and sustainable sanitation services, essential to human health, environmental protection and long-term sustainable development.

Waste Management

Project for a Lateral Enlargement of the Vale do Forno Landfill and Supervision of the Works

Country: Portugal
Client: Câmara Municipal de Lisboa

Services
Execution of several partial projects for the street layout, leachate drainage, rainwater and biogas. Supervision of works.



Project for the Removal and Treatment of the Alto Tâmega Solid Waste

Country: Portugal
Client: Associação de Municípios do Alto Tâmega (AMAT)

Services
Master Plan for the selection of the solutions for treatment and recovery of the solid waste of the Alto Tâmega Region with about 500 000 inhabitants; Detailed Design of the sanitary landfill, of the closing of the sanitary disposal landfill and of the eco-centers.



Western Landfill Site

Country: Portugal
Client: RESIOESTE - Valorização e Tratamento de Resíduos Sólidos, S.A.

Services

- Design/ Construction
- Detailed Design of Landfill
- Support Installations
- Sorting Plant
- Biogas
- Leachate Treatment Plant
- Professional Staff Training



Transfer Station and Ecocentre of Montalegre - District of Montalegre

Country: Portugal
Client: RESAT - Valorização e Tratamento de Resíduos Sólidos, S.A.

Services
This project addressed the transport of Solid Urban Waste in the district of Montalegre, improving Landfill Site management by allowing better scheduling of waste arrivals. The planned infrastructures include a Transfer Station, an Ecocentre, and a small administrative and control unit.
To enable selective collection, the Ecocentre includes four 30 m³ containers for temporary storage of materials from separative collection until they are sent to sorting or recycling facilities. The Transfer Station consists of a load hopper, a stationary compactor, a transfer table, and 30 m³ closed containers, with a covered hopper to prevent dust and light particle dispersion.

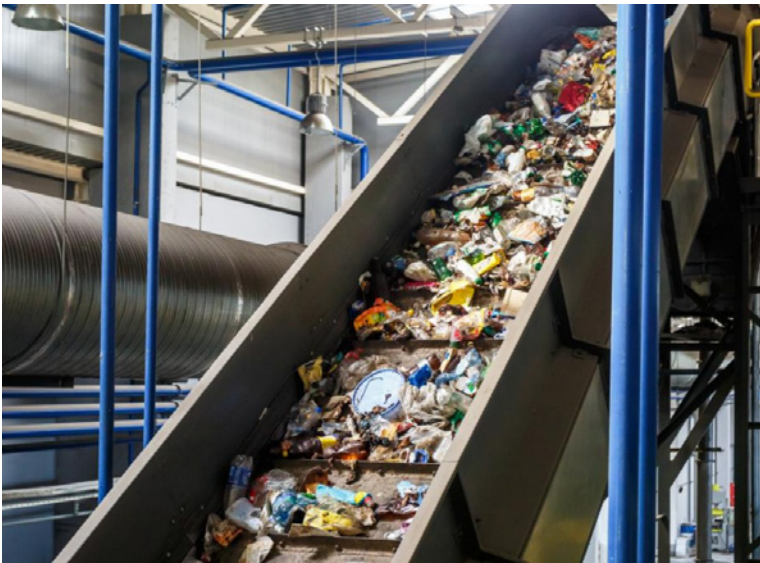


Waste Management

Vale do Ave Sorting Plant

Country: Portugal
Client: Resinorte

Services
Basic Design and sizing of plant and equipment for a processing flow of metal and plastic, originated in separate collection.



Selective collection of Biowaste at the Trajouce Ecopark

Country: Portugal
Client: Tratolixo

Services
Preliminary program for a design and construction tender to adapt the mechanical treatment plant for biowaste from separate collection.



Recovery of the Ermesinde Landfill and Utilisation of Biogas

Country: Portugal
Client: LIPOR - Serviço Intermunicipalizado de Gestão de Resíduos do Grande Porto, S.A.

Services
Detailed Design and the technical-economic study for the viability of the recovery and use of the landfill gas generated. The technical recovery solution selected was the production of electric power.



Baixo Tâmega Landfill Site

Country: Portugal
Client: REBAT - Valorização e Tratamento de Resíduos Sólidos do Baixo Tâmega, S.A.

Services
Final Design and Technical Assistance.



Waste Management

Project for the Sealing of the Trajouce and Laveiras Garbage Dumps, for the Construction of the New Abrunheira Sanitary Landfill and for the Trajouce Grading Plant

Country: Portugal
Client: TRATOLIXO - Tratamento de Resíduos Sólidos, E.I.M.

Services
Completion of the Detailed Design, preparation of the Tender Procedures for the construction work and the inspection controls and, also, technical appraisals of the respective proposals.



Environmental Recovery of 8 Waste Dump Sites of the Alto do Tâmega

Country: Portugal
Client: RESAT - Valorização e Tratamento de Resíduos Sólidos, S.A.

Services
Final Design and Technical Assistance.



Hospital Waste Management Project - Luanda University Hospital

Country: Angola
Client: MOERSCHEL ARQUITECTOS, Lda.

Services
The Hospital Waste Project, provide the new Hospital with technical solutions for the correct management of waste, ensuring adequate hygiene conditions, in accordance with the legislation in force on this subject. Presented mechanisms to collect waste and storage sites with capacity and characteristics appropriate to the quantities and types of waste produced. Presented also, the basic principles, the methodologies, the spaces destined to the deposition and conditioning of residues, the equipment of deposition, transport, pre treatment and treatment.



Pico Island Landfill

Country: Portugal
Client: Associação de Municípios da Ilha do Pico

Services
The execution project comprises earthworks, final modeling with landscaping and environmental protection systems, namely waterproofing, drainage and collect of leachate, rain water and biogas. It also includes the support installations and infrastructures such as water, irrigation and fire-fighting supply and distribution systems, waste water drainage and treatment, roads, personnel and vehicle access, exterior lighting and fencing, as well as the specification and installation of mechanical, electromechanical and electrical equipment and other fixed and moveable equipment required for operation. A description of the operating and monitoring system was also included.



Waste Management

Laveiras Landfill Design

Country: Portugal
Client: Câmara Municipal de Oeiras

Services
Design for construction of a landfill and supervision of works.



Sanitary Landfill and Sorting Plant of Leiria

Country: Portugal
Client: SOMAGUE Engenharia, S.A. / ACORIL Empreiteiros, S.A.

Services
Design / Construction Detailed Design and Environmental Impact Study.



Detailed Design of the Solid Waste System of Dominica

Country: Dominica
Client: Ministry of Health and Social Security / Ministry of Public Works, Energy and Ports (EU Financed Project)

Services
Detailed Design of a new sanitary landfill and the rehabilitation of the two existing garbage disposal sites; Preparation of the tender documents; Evaluation of the proposals.



Final Design and Environmental Impact and Social Assessment of Uíge-Negage Landfill

Country: Angola
Client: Governo Provincial do Uíge / MAPA JOMA - Engenharia Global, Lda.

Services
Final Design and Environmental Impact Study, including the social component.



Waste Management

Kossihouen Municipal Landfill

Country: Ivory Coast
Client: MOTA ENGIL Africa

Services

- a) PHASE 1
- Casier 1;
 - Passive barrier;
 - Active barrier consisting of HDPE geomembrane;
 - Bottom and surface drainage system;
 - Connection of networks to the main collector;
 - Connection of leachate, contaminated water and rainwater networks;
 - Provisional access road to the landfill;
 - Weighbridge.
- b) PHASE 2
- Leachate treatment system by reverse osmosis;
 - Definitive access road;
 - Casier 2 and corresponding complementary premises.



Waste Management Study and Landfill Design Consultancy

Country: The Gambia
Client: Ministry of Fisheries, Water Resources & National Assembly Matters

Services

This contract includes the consultancy services to conduct a Waste Management Study for the Brikama Council and prepare a detailed engineering design for a new engineered sanitary landfill with capacity for 20 years of waste disposal.

The scope of the services to be provided, in a two stage implementation schedule, basically will include:

- Phase I: Waste Management Study;
- Phase II: Design of new engineered sanitary landfill, including its Preliminary Design and its Detailed Design

Global amount of the Contract: € 315.203,48
Participation of PROCESL: 35,025%

Project financed by the African Development Bank



Expansion of the Boticas Waste Containment Unit

Country: Portugal
Client: Resinorte

Services

Design Project; Detailed Design and Technical Assistance; Containment Cells; Waterproofing and leakage prevention Sistem; Leachate Treatment Plant; Collection and Treatment of Biogas; Operation Plan.



Refurbishment of the Transfer Station and Sorting Plant in Madeira's East Zone

Country: Portugal
Client: ARM

Services

Preliminary Project for Design/Construction.





Waste-to-Energy

Quadrante engineering ensures rigorous environmental safety, combined with operational excellence, promoting efficient, sustainable processes and reliable results, with a positive impact on performance and the environment.

Waste-to-Energy



Quadrante delivers integrated and future-ready **waste-to-energy engineering solutions** designed to transform waste into valuable resources, ensure efficient energy recovery, and fully align with environmental sustainability targets and long-term client value creation.

Waste-to-energy solutions transform waste into valuable power while reducing landfill use and emissions.

Working with a top-tier engineering company like Quadrante, ensures advanced technology, efficient plant design, and full regulatory compliance.

This expertise leads to higher energy recovery rates, optimized operations, and reduced downtime. Economically, it delivers long-term cost savings, stronger returns on investment, and lower operational risks. Operationally, it enhances reliability, safety, and environmental performance.

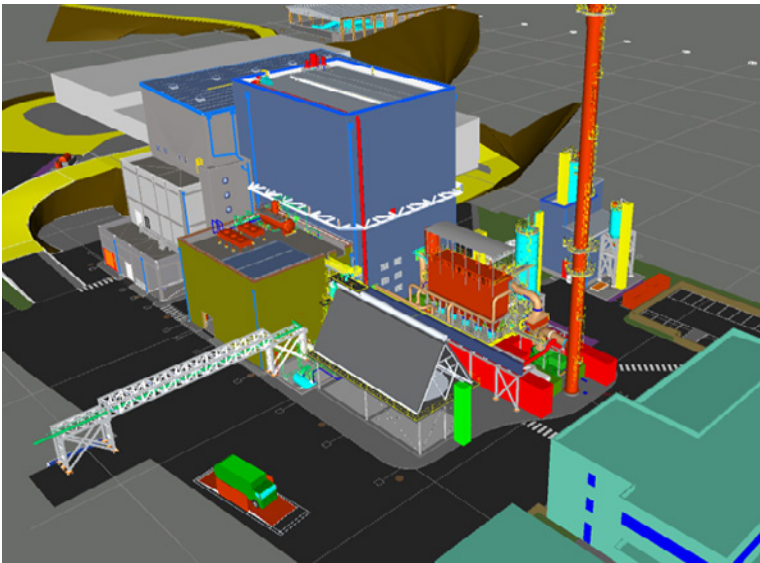
Choosing Quadrante Group is key to maximizing both financial and sustainability benefits.

Waste-to-Energy

MUSAMI - Waste-to-Energy Plant on the Island of São Miguel

Country: Portugal
Client: CME, Construção e Manutenção Electromecânica, S.A.

- Services**
- Earth network and lightning protection installation
 - Medium voltage electrical installation
 - Low voltage electrical installation, normal and backed up
 - Telecommunications and structured network
 - Command, control and instrumentation installation
 - Fire and hazardous gas detection
 - Mechanical installation of fire extinguishing
 - Mechanical installation of the compressed air plant
 - Installation of ventilation and air conditioning
 - Installation of lighting and sockets in buildings
 - Installation of street lighting



3 Biomethane Production Units - 39 GWh/year

Country: Portugal
Client: Ferbgás Renováveis

- Services**
- Preliminary Registration with DGEG.
 - Environmental Impact Assessment (EIA).
 - Detailed Engineering.
 - Municipal Licensing.



5 Biomethane Production Units - 45 GWh/year

Country: Portugal
Client: Mota Engil Energia (Mewton)

- Services**
- Preliminary Registration with the DGEG
 - Environmental Impact Assessment (EIA)
 - Detailed Engineering
 - Municipal Licensing



2 Biomethane Production Units - 60 GWh/year

Country: Portugal
Client: Gás da Terra

- Services**
- Preliminary Registration with DGEG.
 - Environmental Impact Assessment (EIA).
 - Engineering for the EIA, including Process Engineering.



Waste-to-Energy

Environmental Due Diligence under the Process of Privatization of EGF

Country: Portugal
Client: SUMA – Serviços Urbanos e Meio Ambiente, S.A.

- Services**
- Environment evaluation of the plants and operations of the several systems of EGF;
 - Visits and reviews of all the sites of the EGF universe - raising the presente situation and diagnostic, including surveys in all industrial units.



Technical Due Diligence under the Process of Privatization of EGF

Country: Portugal
Client: SUMA – Serviços Urbanos e Meio Ambiente, S.A.

- Services**
- Technical evaluation of the plants and operations of the several systems of EGF;
 - Visits and reviews of all the sites of the EGF universe - raising the presente situation and diagnostic, including surveys in all industrial units.



Technical and Environmental Consulting under the Process of Privatization of EGEO

Country: Portugal
Client: FomentInvest, SGPS, S.A.

- Services**
- Technical and environmental evaluation of the plants and operations of the several sites of EGEO;
 - Visits and reviews of all the plants of the EGEO universe - raising the presente situation and diagnostic, including surveys in all industrial units.



Technical and Environmental Auditing of EGF

Country: Portugal
Client: SUMA TRATAMENTO, S.A.

- Services**
- Technical and environmental evaluation of the plants and operations of the several systems of EGF;
 - Visits and reviews of all the sites of the EGF universe - raising the presente situation and diagnostic, including surveys in all industrial units.



Studies and Licensing

Consulting that protects populations and environment, turning waste into a sustainable value, reinforcing a circular economy

Studies and Licensing



We transform the waste from menace to a useful resource, promoting the **population wellbeing**, the **environment protection** and the **local development**, always with sustainability in our focal point.

At Quadrante, we combine environmental, social and engineering expertise to support the successful development, licensing and implementation of waste and circular economy projects. Our multidisciplinary teams deliver environmental and social assessments, technical studies, permitting strategies and regulatory compliance services, helping clients identify risks, secure approvals and achieve long-term sustainability objectives.

From site selection and feasibility studies to environmental licensing, construction support and operational compliance, we provide integrated solutions aligned with national legislation and international best practices, ensuring that projects create value while protecting communities, biodiversity and natural resources.

Environmental Licensing & Compliance

We support the environmental assessment and licensing of landfills, transfer stations, sorting facilities, recycling plants, waste-to-energy projects, biomethane facilities, composting plants, anaerobic digestion units and circular economy infrastructure by developing:

- Environmental Impact Assessments (EIA/ESIA)
- Strategic Environmental Assessment (SEA)
- Environmental Due Diligence (EDD)
- Biodiversity and Critical Habitat Assessments
- Air Quality, Noise and Odour Studies
- Water Resources and Hydrogeology Studies
- Waste Facility Permitting
- Industrial Environmental Licensing
- Environmental Monitoring Plans
- Environmental Compliance Audits
- ESG and Sustainability Advisory

Through its multidisciplinary Environment and Sustainability teams, Quadrante supports clients in meeting national regulatory requirements and international standards, including IFC Performance Standards, World Bank Environmental and Social Framework, Equator Principles, EIB Standards, and EU environmental legislation. This enables projects to secure permits, financing and social acceptance while minimising environmental and social risks.

Studies and Licensing

Code of Practice for Waste Management on Islands

Country: Portugal

Client: European Commission Directorate - General Environment, Nuclear Safety and Civil Protection - Xu.E.7 Waste Management Policy Unit

Services

The European Commission launched a study on solid waste management systems in EU island regions, carried out by QUADRANTE in the Madeira and Azores Archipelagos. Its first phase involved a survey of existing systems based on questionnaires sent to municipalities and complemented by direct contacts. The data were compiled by island in an "Interim Report" presenting a general characterization of the Azores, including geography, administration, population, infrastructure, economic activities, and relevant legislation. The report also outlines the waste management systems, covering organization, personnel, equipment, waste types, treatment, final disposal, economic aspects, and an overall assessment of the current system.



Strategic Reference Framework and VALORSUL Operational Intervention Plan for the Integrated Management of USW in the Municipalities of Amadora, Lisbon, Loures and Vila Franca

Country: Portugal

Client: VALORSUL - Valorização e Tratamento de Resíduos Sólidos das Regiões de Lisboa e do Oeste, S.A.

Services

The study was developed in two phases: Phase I, a diagnostic study of the current situation, and Phase II, focused on the identification, characterization, and comparative analysis of alternatives. Phase I included a qualitative and quantitative characterization of urban solid waste, based on data processing from surveys, allowing a diagnosis of the existing waste management system in the four municipalities involved, considering technical, economic, and legal aspects. Phase II defined quantitative targets for material recovery and identified operational and institutional management scenarios, concluding with the presentation of an Operational Intervention Plan outlining objectives, actions, and an indicative implementation schedule.



Treatment Study of the Construction Waste in the Lisbon Area

Country: Portugal

Client: Câmara Municipal de Lisboa - Direção Municipal de Ambiente Urbano

Services

Raising situation; Previsions settlement; Analysis realization to selected samples of construction wastes in Lisbon city repairs to arrangement valuation, particularly in valorization materials; Report elaboration relating to part I to IV from study.



Hospital Waste Deposition Study and Elaboration of the respective Procedures Manual

Country: Portugal

Client: Faculdade de Ciências Médicas da Universidade Nova de Lisboa

Services

- Characterization and diagnostic of the present situation (legal framing; functional organization of the university complex; raising of the utilized procedures at solid wastes internal circuit; operationally valuation of the existent incinerator);
- Solutions proposal for wastes deposition (proposals for separation, selection, deposition, arrangement and storage of the wastes and respective equipment; wastes circulation plan; wastes register system; support informative material);
- Procedures manual (procedures definition and security rules; preparation and collaboration in divulgation sessions to university personnel).



Studies and Licensing

PETROGAL's Integrated Waste Management Plan

Country: Portugal
Client: PETROGAL - Petróleos de Portugal, S.A.

Services
The actions involve various aspects and go from the survey of the company's situation in terms of waste, the identification of the measures of reduction / minimization and waste treatment / elimination, to the definition of procedures and methodologies which would allow the company to improve its performance in environmental terms.



Regulation of Solid Waste of the Island of Porto Santo

Country: Portugal
Client: PORTO SANTO VERDE - Geoturismo e Gestão Ambiental, E.E.M.

Services
Preparation of a Regulation to define the behaviour to adopt by the users and by the management entity of the Solid Waste System of the Island of Porto Santo. The Regulation also includes an economic study to define tariffs to be applied to the inhabitants and a summary of fundamental legislation on waste.



Strategic Plan for Hospital Waste of the Azores

Country: Portugal
Client: Direção Regional do Ambiente dos Açores (DRA Açores)

Services
The Strategic Plan for Hospital Waste of the Azores (PERHA) analyzes compliance with legislation, health units, waste production and records, management stages, and professional training. It identifies key regional problems and promotes strategic principles such as waste prevention, risk reduction, recycling, treatment, final disposal, professional training, and public information. The plan defines actions for 2002–2006 to ensure integrated and sustainable regional management, proposes alternative waste management scenarios, estimates implementation costs and funding sources, assesses legislative needs, ensures access to updated information, and establishes a review date for PERHA.



Study of the Biodegradable Waste of the Main Producers in the Intervention Area of the Multimunicipal System of the Algarve

Country: Portugal
Client: ALGAR - Valorização e Tratamento de Resíduos Sólidos, S.A.

Services
The study was carried out in two stages. In the first stage, the 2,561 biodegradable waste producers in the Algarve were identified and characterized through bibliographic research, consultations with relevant entities, and field work, allowing the determination of the types and quantities of waste produced by each. In the second stage, based on the quantities identified, areas with greater potential for biodegradable waste production were defined. From these areas, organic waste collection circuits were established and optimized using a model, then tested in the field to assess their feasibility. All producers were incorporated into a database linked to a Geographic Information System (GIS).



Studies and Licensing

Waste Management Plan of the Special Economic Zone of Luanda-Bengo Industrial Pole

Country: Angola
Client: Gabinete de Reconstrução Nacional (GRN)

Services
Preparation of Waste Management Plan, including the realization of a survey in industrial units.



Waste Management Plan of the Industrial Hub of Luanda-Bengo Special Economic Zone

Country: Angola
Client: Gabinete de Reconstrução Nacional (GRN)

Services
Preparation of a Waste Management Plan, including the development of a Survey on Industrial Units.



Conversion Plan of Municipal Solid Waste System for the Municipality of Almada

Country: Portugal
Client: Câmara Municipal de Almada

Services

- Diagnosis of the current Municipal Solid Waste (MSW) deposition and collection system in the Municipality of Almada, addressing economic and environmental aspects and citizen satisfaction, and resulting in a report covering the legal framework, territorial and socioeconomic context, the Tagus South Edge multi-municipal system, and the objectives of the Conversion Plan.
- Definition of the Municipal Solid Waste Conversion Plan for the 11 parishes of Almada, ensuring user and worker safety and promoting container standardization, including the establishment of objectives, required resources, and the implementation strategy.

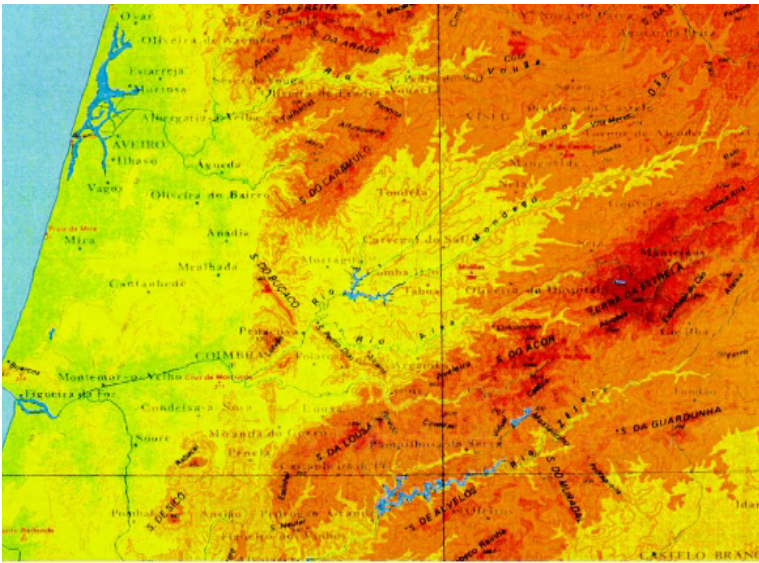


ERSUC Regional Plan

Country: Portugal
Client: ERSUC - Empresa de Resíduos Sólidos do Centro, S.A.

Services
Solid Waste Master Plan divided into 4 stages:

- Diagnostic Study (characterizing the waste, the existing waste management systems, the market survey, diagnosis);
- Master Plan (selection of sites, definition of solutions for the recovery of resources and destination / final waste treatment);
- Organization of Economic Data;
- Economic-Financial Analysis.



Studies and Licensing

Master Plan for the Solid Wastes of the Lezíria do Tejo Sub-Region

Country: Portugal

Client: Comunidade Intermunicipal do Médio Tejo (ex-Associação de Municípios do Médio Tejo)

Services

Master Plan developed into 2 stages:

- Raising the present situation and diagnostic (characterization of the present situation, first diagnostic, emphasizing the main needs and difficulties – about 4,000 km² to 215,000 inhabitants;
- Alternative analysis and recommendation of integrated solution (production, deposition, recovery, transportation and making up of solid wastes, organization and removal, treatment and/or final destiny management, to estimate the costs and financial evaluation of the proposal solutions, local preliminary selection for the proposal solution implementation.



Master Plan for the Solid Wastes of Municipality of Póvoa de Varzim

Country: Portugal

Client: Câmara Municipal da Póvoa de Varzim

Services

Master Plan developed into 3 stages:

- Raising, characterization and diagnostic of the present situation (general characterization of the study area – about 90 km², to 62,000 inhabitants – solid waste evaluation, characterization, evolution and valorisation);
- Management alternative solutions (waste characterization, quantitative ends scenarios of material valorisation, technical – operational management sceneries, recommended solution, juridical-institutional scenarios of management);
- Development of the selected management standard (presentation and characterization of the selected management standard, structured by a implementation actions plan form).



Strategic Plan for the Development of a South Bank Solid Wastes integrated System

Country: Portugal

Client: Câmara Municipal do Seixal

Services

Plan developed into 2 stages:

- Raising the present situation and diagnostic (solid wastes characterization, existents solid wastes raising, market analysis, legislative framing, characterization and situation diagnostic – about 1,350 km to 536,000 inhabitants;
- Solutions proposal for short / medium and long term to the Urban Solid Waste treatment, final destination and valorisation (solutions definition and optimize strategies, operation and investment costs, processing tariff valuation).



Environmental Impact Assessment of the expansion of the CITRI Landfill, in Setúbal

Country: Portugal

Client: Blueotter - Gestão de Resíduos

Services

EIA for the site, including all the documentation needed to fulfill the process with the local and national licensing authorities.





Planning

*From liability to resource:
Innovation in the waste management*

Planning



Quadrante is involved with local authorities from countries around the world, to plan and implement waste management and reduction policies and strategic plans that ensure the implementation of the world's best practices and references, meeting the most demanding requirements for circular economy and public health and regulatory standards.

Our solutions are adapted to diverse contexts — from large urban centers to small communities, also national wide — and respond to current challenges such as new materials, evolving technology, and operational resilience.

We support clients in solving their problems through science. In partnership with our customers, we employ specialized and innovative methodologies like Design Thinking, Material Flow Analysis, and Life Cycle Assessment to develop and work on systematic and efficient solutions.

Our solutions are organized around four key lines of action:

- Policy, Strategy & Planning
- Corporate Sustainability
- Environmental Compliance
- Research & Innovation

Our multidisciplinary teams integrate engineering, waste management expertise, and digital tools to optimize performance, reduce operating costs, and ensure long-term sustainability.

Each project is approached with a full lifecycle perspective, from source protection and pretreatment to final quality control, ensuring that waste treatment infrastructure is robust, efficient, and climate-resilient.

Planning

Impact Assessment and Technical Assessment for the Review of the WEEE Directive

Client: European Commission - DG Environment

Services

The work was structured around two main components. The impact assessment carried out a quantitative analysis of regulatory costs and the economic, environmental, and social impacts of policy options, using techno-economic analysis and an extended input-output model. A business-as-usual baseline was defined to compare options and identify regulatory inefficiencies.

The technical assessment supported the policy analysis and legislative proposal, consolidating results into a technical report that identified limitations of the WEEE Directive and provided recommendations for future policy. Public and targeted stakeholder consultations were used to validate findings and gather additional evidence.



Assessing the Potential to Enhance the Circularity of Bio-based Waste Streams

Client: European Environment Agency

Services

The work comprised three main tasks:

- Task 1 involved analysing EU biobased waste flows using official statistics and complementary sources, and mapping them with Sankey diagrams to identify inefficiencies and value losses.

Task 2 applied a Material Value Loss (MVL) methodology to quantify untapped circularity potential and identify regulatory, technical, and market barriers using a Theory of Change approach.

- Task 3 consolidated the results into a final report for the EEA and the European Commission. The combined MVL-ToC approach ensured quantitative, policy-relevant recommendations.



Economic and Environmental Feasibility Assessment of CIRVER

Country: Portugal
Client: ECODEAL | EGEO

Services

- Data collection;
- Literature review;
- Quantitative analysis;
- Environmental and socioeconomic assessment;
- Identification of priorities and recommendations.



Circular Value Chains in the EU

Client: European Commission - DG RTD

Services

The work covered various tasks, including the analysis of linear and circular value chains, the identification of successful circular models, the development of analytical and replication toolboxes, and the provision of inputs for European circular economy policy and collaborative partnerships.

The approach combined sectoral analysis with practical policy tools and addressed circularity strategies beyond recycling, such as product-service systems and dematerialisation.



Planning

Preparation of the Strategic Waste Management Document for the Autonomous Region of Madeira (RAM)

Country: Portugal
Client: Direção Regional de Ordenamento Territorial e Ambiente, atual Direção Regional do Ambiente e Alterações Climáticas

Services

The elaboration of the Waste Strategic Document of RAM included the following activities:

- Elaboration of the methodological approach and definition of the schedule of activities
- Identification of the Legal and Strategic Framework
- Characterization of the reference situation
- Identification and consultation of stakeholders and definition of strategic objectives
- Definition of scenarios and targets
- Definition of lines of action and measures to be implemented
- Development of a Waste Program
- Assessment of costs and economic and social impacts
- Development of a governance model



Impact Assessment for the Circular Economy Act

Client: European Commission - DG Environment / DG GROW

Services

The work is organised into two main blocks:

- The first supports the formal impact assessment, including stakeholder consultations, a business-as-usual baseline to 2050, and the assessment of economic, social and environmental impacts across Member States.
- The second block focuses on the technical assessment of key circular economy measures, such as waste criteria reform, Extended Producer Responsibility, circular public procurement, improved waste collection and valorisation, and landfill reduction. The project also supports the Regulatory Scrutiny Board process.

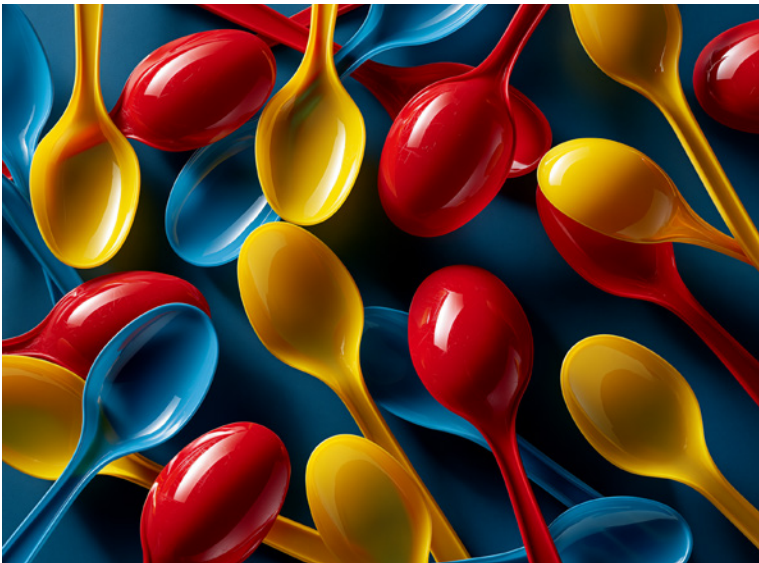


Plastics Market Study for Pakistan

Country: Pakistan
Client: International Finance Corporation | World Bank Group

Services

The team characterised the plastics market in Pakistan through an integrated approach combining market analysis, private sector engagement and regulatory review. Supply and demand, market segments, growth factors and barriers to circularity were assessed, supported by consultations with value chain actors and a benchmarking of the regulatory framework against international best practices. The work resulted in priority action recommendations for the private sector, with a strong practical focus on reducing the environmental impact of plastics and strengthening recycling markets in the country.



Quantifying Recycling Quality in Europe – Value Chain Model Development

Client: European Environment Agency

Services

The work was organised into four main tasks. First, a recycling quality assessment framework was developed through literature review, expert consultation and the definition of parameters, methods and data sources. The framework was then applied to four selected material streams, involving EU-level data collection, life cycle assessment (LCA) tools and expert input. The results were externally validated through an expert webinar and consolidated into a final report. The project is distinguished by the integration of LCA with recycling quality assessment, providing a methodology with direct relevance for EU circular economy policies and a strong focus on improving the environmental performance of recycling systems.



Works Supervision



*Quality and trust in every operation:
rigorous supervision, resilient systems*

Works Supervision



Supervision of waste management infrastructures is essential to ensure that projects are delivered with the **highest technical quality, efficiency, and compliance with environmental and safety standards.** With growing urban populations, climate change pressures, and the need for resilient infrastructure, professional supervision guarantees that investments translate into reliable and sustainable waste treatment and valorisation systems.

At Quadrante, we provide independent and specialized supervision services across the full range of waste infrastructure projects – from collection and transfer systems to separate collection, treatment, and reuse facilities. We ensure that every project is implemented according to design, budget, and deadlines, while safeguarding performance and long-term sustainability.

We support clients throughout the construction and commissioning phases, combining technical rigor with a collaborative approach that aligns contractors, designers, and operators.

Our expertise includes:

- > **Supervision of construction** works for waste collection, separate fluxes and treatment plants
- > **Quality control** of materials, equipment, and construction processes
- > **Verification of compliance** with technical specifications, safety, and environmental standards
- > **Monitoring** of work progress, cost control, and contract management
- > **Commissioning, testing, and performance** validation of systems and facilities
- > **Technical assistance and capacity building** for operators and public authorities

By ensuring transparency, compliance, and efficiency, we contribute to the delivery of water infrastructures that improve quality of life, protect the environment, and support the resilience of communities.

Works Supervision

Pico Island Landfill

Country: Portugal
Client: Associação de Municípios da Ilha do Pico

Services
Supervision of the Landfill Construction Works.



Solid Waste System of Dominica

Country: Dominica
Client: Ministry of Health and Social Security

Services
Supervision of the Construction Works.
(EU Financed Project)



Laveiras Landfill

Country: Portugal
Client: Câmara Municipal de Oeiras

Services
Technical Assistance and Supervision of the Works.



Wastewater Treatment Plant of the Macau Peninsula

Country: Macau (China)
Client: Governo de Macau – Gabinete Desenvolvimento de Infraestruturas

Services
General verification of the project;
Verification of the implementation of the works;
Coordination of work execution;
Technical, administrative, and financial management of the works;
Preparation of the provisional acceptance report for the project.



Works Supervision

Water Supply System to the Northern Area of Greater Porto

Country: Portugal
Client: Águas do Noroeste, S.A. (ex-Águas do Cávado, S.A.)

Services
Execution Projects, Tender Process, Proposal Analysis from Bidders, Technical Assistance, and Technical Advisory to the Client during the execution of the works.



Rehabilitation and Reinforcement of the Distribution Network of the City of Maputo Lot 1

Country: Mozambique
Client: EFACEC Engenharia e Sistemas, S.A

Services
Supervision and monitoring of civil construction works associated with the rehabilitation and reinforcement of the electric power network in the city of Maputo.





+ 20

Years of Digital Twins

+ 125

Process Simulation engineers

+ 500

Executed projects

Process Simulation & Digital Twin Solutions

Powered by Inprocess, our Process Simulation & Digital Twins company, we deliver next-generation solutions that enable infrastructure owners to make smarter, data-driven decisions throughout the entire asset lifecycle.

Our Digital Solutions incorporate our deep engineering expertise coming from:

- > Infrastructure design experience
- > Process simulation knowledge
- > Operations Support practice

We are enthusiastic about sharing our knowledge with our clients, working collaboratively to maximize value and operational excellence.

Our solutions are technology-agnostic, allowing us to work with any process simulator, control, or safety system, ensuring flexibility and seamless integration within existing infrastructures.

Solutions & Services

- > Process Digital Twins (offline and online)
- > BIM and GIS-based Digital Twins
- > Process Simulation Studies
- > Operator Training Simulators
- > Flare Systems Revalidation
- > Flow Assurance Studies
- > Process Optimization
- > Digital Training Solutions

Energy

- Oil&Gas Upstream / Midstream
- Oil Refining
- (Petro-)chemicals and Fertilizers
- Green Fuels (H2, biomethane, SAF...)
- Renewable Energy (Wind, Solar)
- Carbon Capture Sequestration
- Power Grids
- Mining

Mobility

- Airports
- Subway

Sustainable Cities

- Water Treatment Plants
- Data Centers
- Water Transport Networks
- Buildings
- District Heating/Cooling

Digital Twin for the Valongo Wastewater Treatment Plant

Quadrante is delivering a multi-year Digital Twin for the Valongo wastewater treatment plant (WWTP), combining a LOD 200 BIM model with operational data on the Q.BIMConnect platform. The first phase connects 62 key process and laboratory datapoints, with a scalable architecture that will progressively integrate additional sensors and systems through to 2028, turning Valongo into a data driven reference plant.

This is Be Water's (the client) first wastewater Digital Twin, co-developed by Quadrante's Digital and Water teams together with central engineering and the Valongo operations team. The project is positioned as a long-term partnership, using Valongo as a lighthouse asset and a template for future Be Water facilities.

The project began in 2024 and Be Water decided to start with Valongo, focusing first on the most relevant flows, energy and process variables, and then extending coverage over the contract period. The roadmap foresees the connection of further datapoints, additional dashboards and the rollout of the concept to other WWTPs and selected end clients in Be Water's portfolio.

Project challenges

From the outset, the Digital Twin had to generate actionable insights on an existing plant, with legacy instrumentation and a client managed data gateway that occasionally interrupted data streams. Limited metering on some pumping systems required close cooperation between design, operations and data teams, and led to clear recommendations on future instrumentation and control upgrades.

Project KPIs

- 62 datapoints integrated, covering pumping, recirculation, oxygen and key lab parameters.
- 5 months of continuous operation, 13.5 million real time values & 2.1 million lab records.
- Data ingestion of 100k records/day, with documented tag structure for future expansion.
- Quick wins identified worth over 4 000 EUR per month in potential OPEX savings from pumping optimisation and reduction of excessive start–stop cycles.
- Digital Twin approach validated as scalable to other Be Water assets, with a roadmap for replication.



Site Selection Tool: Geospatial Intelligence for Water Assets

The development of water-related infrastructure, such as Water Treatment Plants (WTPs), Wastewater Treatment Plants (WWTPs) and hydropower plants, requires early, informed decisions that balance technical feasibility, environmental constraints and regulatory compliance. To support this process, Quadrante developed the Site Selection Tool within the Q. GEOVision platform, enabling a structured, digital and transparent approach to identifying and comparing potential project locations.

Q. GEOVision is a geospatial analysis and monitoring platform designed to support site selection, feasibility assessment and project development, from early planning stages through to construction and operation. By integrating authoritative Geographical Information Systems (GIS) data, multicriteria analysis and interactive dashboards, the platform reduces uncertainty and accelerates decision-making.

Methodology

The Site Selection Tool is based on a two-stage funnel approach, allowing progressive filtering from regional to local scale.

Regional Screening

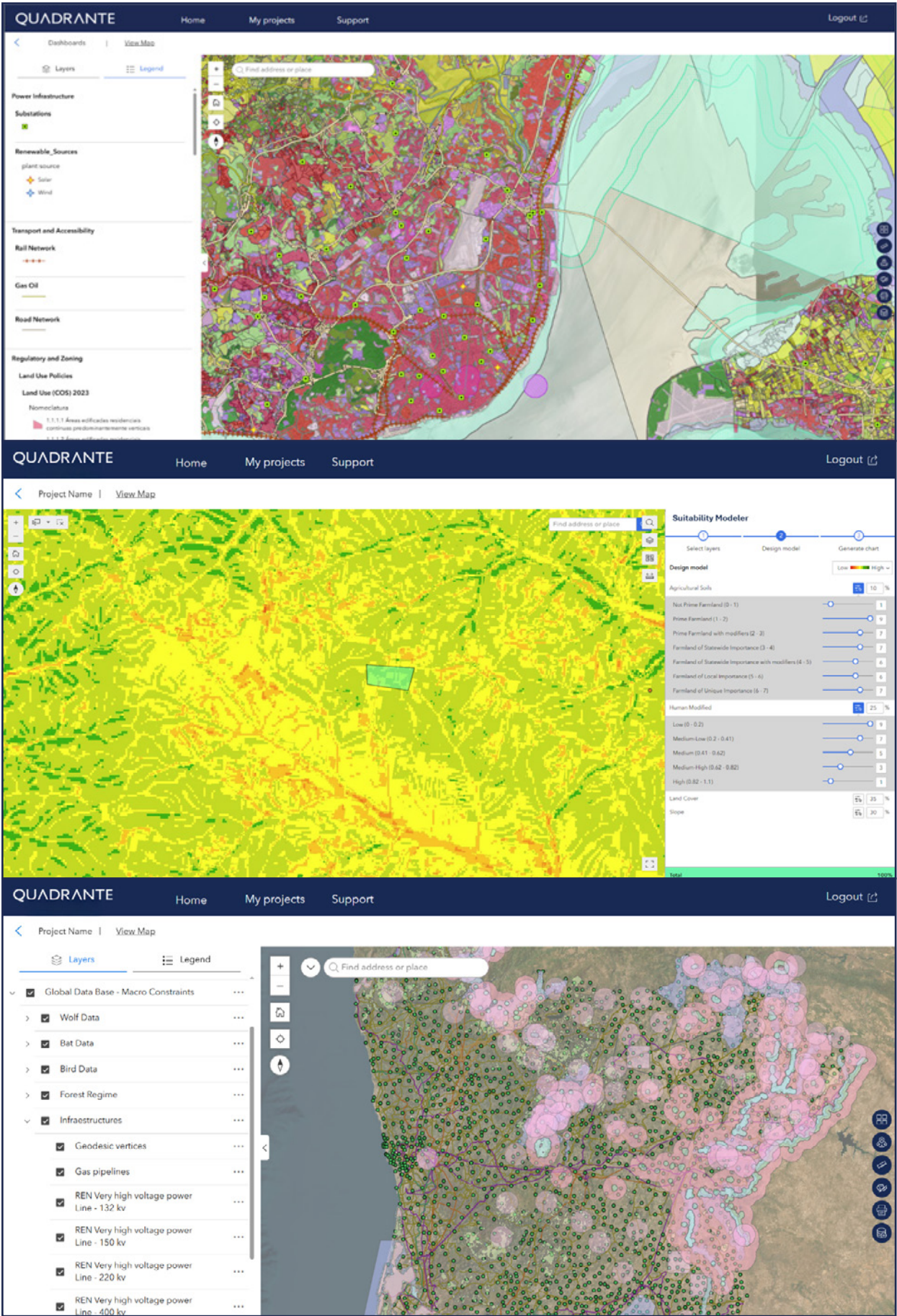
At regional level, the tool excludes restricted or incompatible areas and highlights zones with higher development potential. This stage is particularly effective for early feasibility assessments of water assets. Typical GIS layers at this stage include: Protected and environmentally sensitive areas, Land use and land cover, Hydrographic network and catchments, Flood risk zones, Digital Elevation Model (slope and elevation), Road accessibility, Proximity to power grid and substations, Urban and industrial areas.

Constraint Analysis

At local and municipal scale, the analysis deepens to assess legal, environmental and technical constraints, ensuring regulatory compliance and constructability. Key GIS layers include: Municipal Master Plans (PDMs) and zoning, REN, RAN and water protection perimeters, Cadastral parcels and administrative boundaries, Cultural and archaeological heritage, Biodiversity and sensitive habitats, Existing water and wastewater infrastructure, Detailed floodplain and hydraulic risk maps.

Key Advantages

- Systematic and transparent site selection process.
- Faster screening with reduced time and cost in early phases.
- Early identification of environmental, legal and technical risks.
- Strong decision support through interactive dashboards.
- Solid basis for due diligence, licensing and project development.
- Continuity into future phases such as remote monitoring and operation.



Remote Emissions Monitoring — Features and Benefits

Remote supervision of changing assets using satellite, drone imagery, and gas sensors. It ensures frequent and accurate monitoring, reducing costs and on-site visits.

The goal is to detect Surface Emissions, namely of CH₄, the main constituent of biogas and a source of energy recovery, which is expected, in the near future, to be collected for an upgrading process (biogas upgrading). To optimise the process, we must **minimise losses and leakages** in the capture and conveyance of the raw material.

Whereas in an organic recovery facility, typically an Anaerobic Digestion plant, the process takes place within a closed and confined reactor, in a landfill cell there may be several **points of diffuse emissions and losses**, resulting in reduced revenues and potential penalties related to GHG emissions.

With remote emissions monitoring technology, it is possible to **identify CH₄ emission points** and quantify those same emissions, giving rise to an **optimisation plan for gas collection** and to a scheme of temporary **biogas capture circuits**.

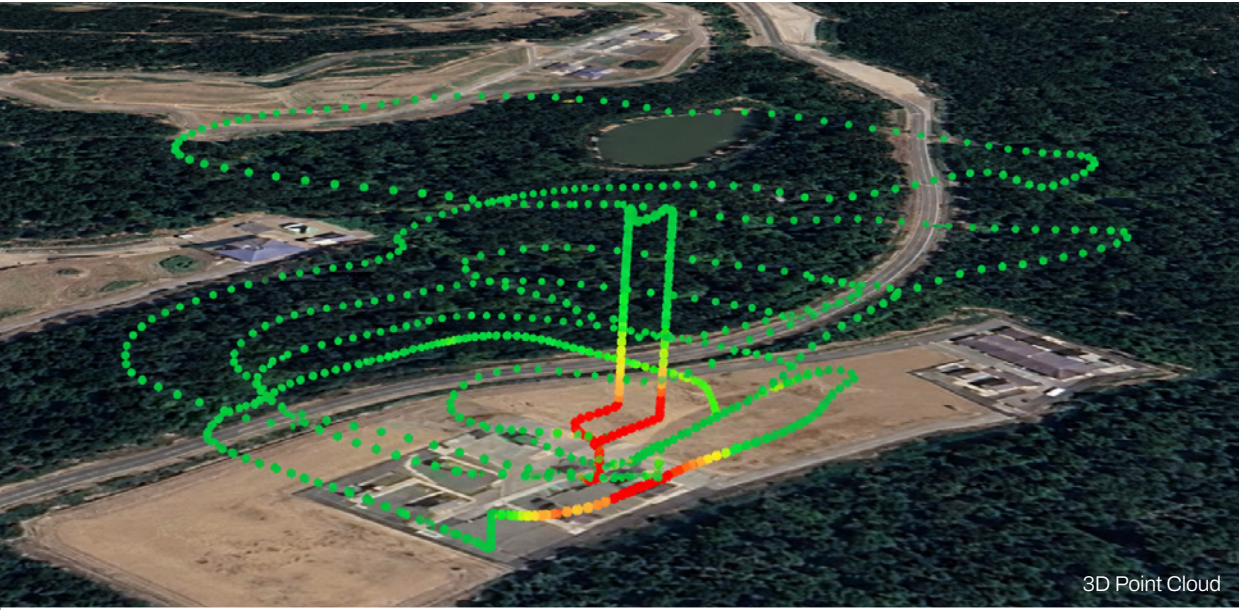
Similar projects have verified that this method, besides being more accurate, is at least **three times faster** than manual readings, without requiring personnel to be exposed to such emissions, thereby increasing **safety levels** as well as the **precision** of the collected and processed data.

Features

- High-resolution images obtained with **drone (<3 cm/pixel)** and **satellite (0.5–3 m)**.
- **Photogrammetric processing**, radiometric correction, thermographic analysis, orthorectification, and georeferencing in a standardized coordinate system.
- **3D mesh** resulting from drone flights allows for **volume and shading** analysis.
- **Point cloud** and **3D grid** resulting from **gas sensor** captures.
- Interactive web application with **recurring updates and real-time data feeds**.
- **Structured repository** of images and reports for traceability and audits.
- Dashboards with **standardized information** to support inspection and quality control.
- **Multi-site analysis** allows you to compare performance between different regions.

Advantages

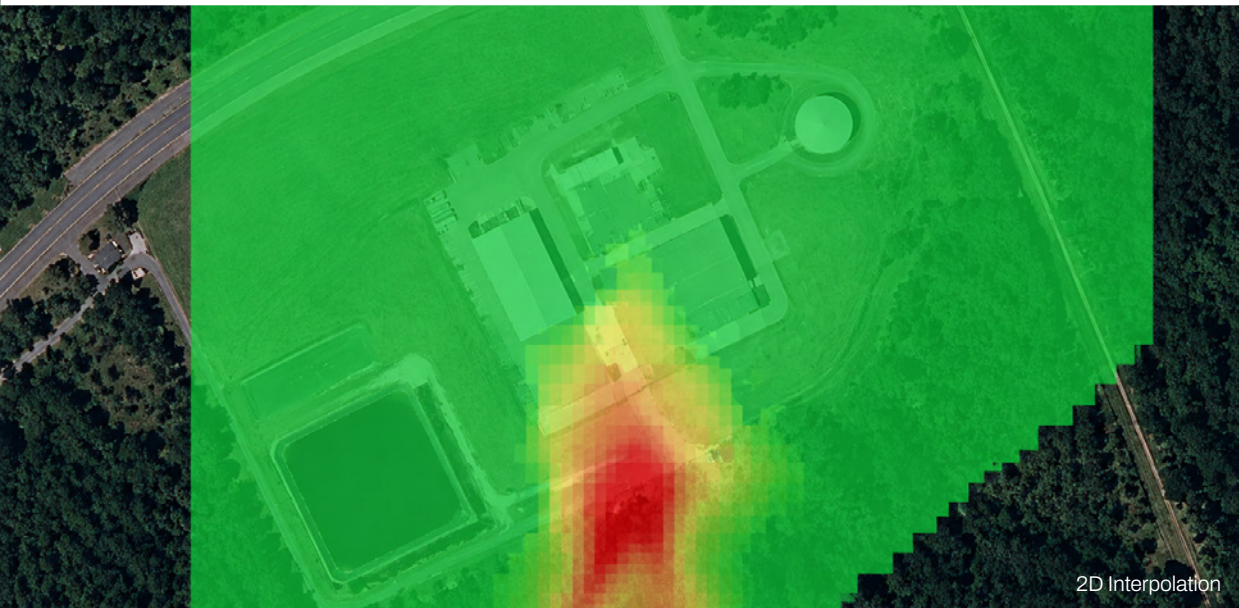
- Easy monitoring of **remote or geographically dispersed sites**.
- **Less field work**, more frequent and accurate inspections.
- **Early problem detection** for timely interventions.
- **Reduced site visits** and improved data transparency.
- Standardized reports for **efficient comparisons**, supporting supervision.
- Supports **remote control and strategic decision-making** across global portfolios.



3D Point Cloud



3D Grid



2D Interpolation

Remote Emissions Monitoring — Technologies Integrated into the Module

The Q. GEOVision solution combines different data capture and processing technologies to ensure accurate, recurrent and efficient remote monitoring.

Satellite Imagery

They allow a comprehensive and periodic view of the construction areas, with available resolutions of 3 meters, 50 cm and 10 cm.

Drone Images

Captured with multispectral cameras equipped with GPS RTK, 8K RGB resolution, ensuring high spatial accuracy and visual quality.

Collection via sensors

Data capture with multiple sensing tools attached to the drone (e.g. CH₄ and CO₂).

Photogrammetric processing

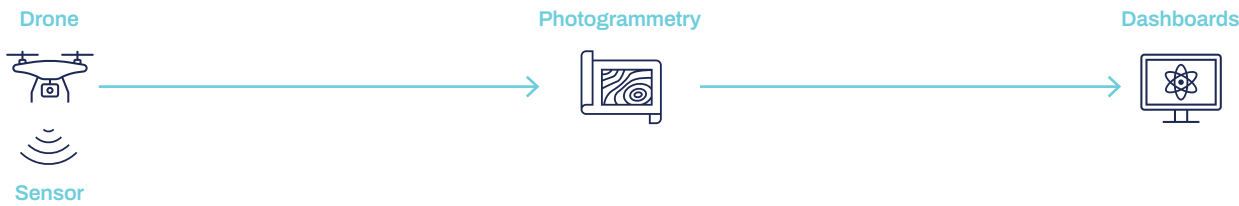
Generation of orthophotomaps, Digital Surface, Elevation, and Terrain Model (DSM, DEM, and DTM) from drone and satellite images. Radiometric correction, orthorectification, and georeferencing in a standardized coordinate system.

Mobile Capture

Georeferenced photographic record in real time, for incident management.

Interactive Dashboards

Consolidation of the processed information and presentation of progress indicators accessible in real time, allowing integrated management and efficient control of evolving assets.



AIRINS Sniffer4D Nano 2 Plus Methane

With Multi-Pass TDLAS technology for methane (CH₄) detection only.

- Linear Range: 0~11,000 ppm
- Lowest Detection Limit: 1 ppm
- Detection Resolution: Better than 1 ppm (Standard Deviation < 0.2 ppm)
- Display Resolution: 0.1 ppm

DJI MATRICE 4E

- **Wide-Angle Camera:** 4/3 CMOS, 20MP Effective Pixels, f/2.8-f/11, Format Equivalent: 24 mm, Mechanical Shutter
- **Medium Tele Camera:** 1/1.3" CMOS, 48MP Effective Pixels, f/2.8, Format Equivalent: 70 mm
- **Tele Camera:** 1/1.5" CMOS, 48MP Effective Pixels, f/2.8, Format Equivalent: 168 mm
- **Laser Range Finder:** Measurement Range: 1800 m (1 Hz); Oblique Incidence Range (1:5 Oblique Distance): 600 m (1 Hz) Blind Zone: 1 m; Range Accuracy (m): ± (0.2 + 0.0015 × D)



Images source: airins.com

Digital System for Environmental Data Monitoring and Management at the Delta Landfill in Campinas

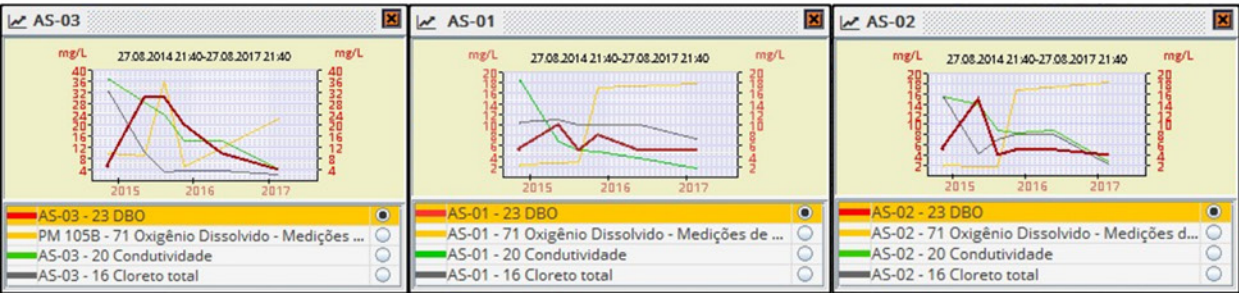
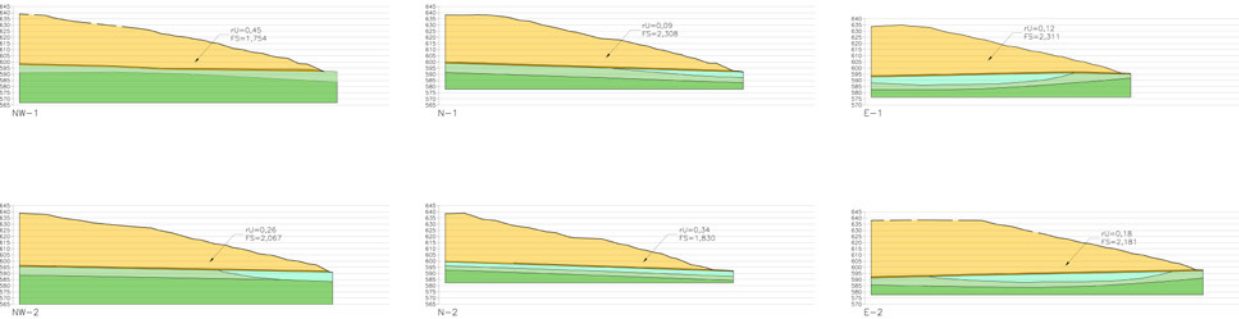
This project involved the implementation of an environmental data management system, utilizing an integrated digital platform to optimize the monitoring of surface and groundwater contamination at the former Delta landfill in Campinas (266,000 m²), used by the municipality of Campinas (952,659 inhabitants).

Through this platform, it is possible to generate environmental and geotechnical reports, covering the analysis of the stability of the waste mass and the implementation of an automated alert system to detect anormal movements.

The key highlight of the project was the adoption of an advanced digital solution for integrated environmental data management, ensuring efficient data consolidation and faster decision-making. This work received technical recognition and was presented at a conference on groundwater pollution, showcasing innovation in environmental and geotechnical data management.

Services

- Implementation of an Environmental Data Management System;
- Monitoring and analysis of surface and groundwater contamination;
- Generation of 30 environmental and geotechnical reports;
- Implementation of an alert system for detecting anormal movements;
- Use of a digital platform for data consolidation and visualization.



Real-Time Simulator

Development of an on-line Process Digital Twin (aka Real-Time Simulator) for the distillation column responsible for the purification of the final product in a petrochemical plant. With the first-principles model the client was capable of estimating the concentration of byproducts that was impossible to measure online in the plant. With this value the process control was ery much improved.

Project Motivation

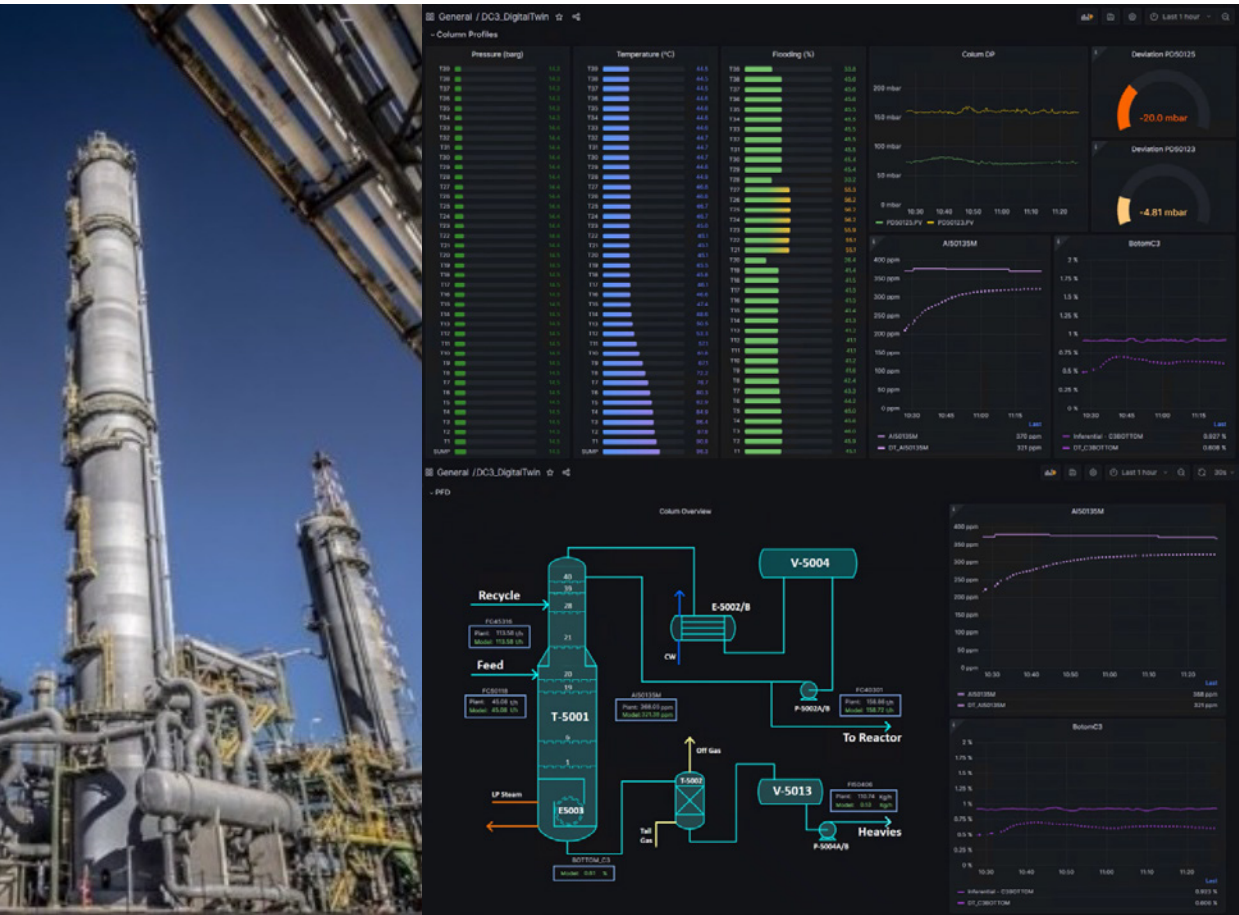
- De-bottlenecking study
- Inferential C3 in bottoms
- Column flooding monitoring
- DMCPlus model generation

Project Challenges

HYSYS dynamic model read/write data every 10 seconds from IP21

Value

Allows DMC controller to minimize bottom propylene losses and prevent flooding



Operator Training Simulator

The facility will capture up to 800,000 tonnes of carbon dioxide per year – more than the total annual emissions from road traffic in Stockholm, from the biogenic flue gases of the already existing combined heat and power plant. This marks a significant step in the transition towards an energy supply with net-zero emissions.

Support

- Validation of the BECCS process design
- Verification of the plant's Distributed Control System – DCS (Siemens Energy SPPAT3000)
- Support for design modifications and operational optimization
- Comprehensive plant operators training prior to plant commissioning

Solution

- A highfidelity dynamic model of the full BECCS process
- A dedicated process simulation platform with orchestration tools (start/stop, snapshots, disturbances, etc.)
- A full Soft DCS replica of the SPPAT3000 control system
- OPC-based communication architecture
- Hardware setup with instructor station and scalable operator training workstations



Other Projects

WASTE MANAGEMENT	Client
WWTP for landfill leachate at Pico landfill	Associação Municípios Ilha Pico
Alto Tâmega Intermunicipal Landfill	SOMAGUE
Closure of Póvoa de Varzim landfill	LIPOR
Closure of Vila do Conde landfill	LIPOR
Detailed Design of the Resioeste Landfill	Somague-Acoril
Detailed Design of Baixo Tâmega Landfill	EGF
Expansion of Leiria Landfill	Valorlis
Environmental rehabilitation and sealing of 3 dump sites in Baixo Tâmega system	REBAT
Closure of Resat dump sites (Montalegre and Chaves)	RESAT
Study for removal of waste from Luz, Mourão and Granja dump sites	EDIA
Landscape integration project of Granja dump site	EDIA
Non Dangerous Industrial waste Landfill Detailed Design	Portucel Tejo
Detailed Design of sealing and landscape rehabilitation of Trajouce landfill	Tratolixo
Detailed Design of sealing and landscape rehabilitation of Laveiras landfill	Tratolixo
Detailed Design and construction of Abrunheira landfill	Tratolixo
Sealing of Stockfarm landfill	DOMINICA
Closure and post-closure maintenance of ash landfill	REN
Sealing of Portsmouth landfill	DOMINICA
Ash landfill at Tapada do Outeiro	REN
Reformulation of ETAL project – Abrunheira	Tratolixo
Cova da Beira landfill	Somague
Uíge–Negage landfill project	SOAPRO (Uíge Provincial Government)

STUDIES AND LICENSING	Client
Environmental Impact Study of the controlled landfill for industrial waste (Portucel Tejo)	GRP (Portucel Tejo)
Environmental Incidents Study – RESIOESTE	ACORIL
Environmental Incidents Study – Baixo Tâmega	GRP
Environmental Impact Study for design of sanitary landfill for residues from RSU treatment operations	Tratolixo
Environmental Impact Study – Uíge landfill	SOAPRO (Uíge Provincial Government)
Environmental Impact Study of Malange landfill	Angola

PLANNING	
Solid waste removal and cleaning at MARL	MARL
Petrogal Integrated Waste Management Plan	Petrogal
Solid waste regulation – Porto Santo Island	Porto Santo Verde, E.M.
Strategic plan for hospital waste in the Azores	DRA Açores
Consultancy in waste management / sanitary landfills	SGS
Consultancy services for Dominica solid waste disposal project – Phase I	DOMINICA
Integrated Waste Management Plan – CLCM (Logistics canal park)	CLCM
Study of biodegradable waste production (Algarve SM area)	Algar
Waste Management Plan for Viana Industrial Hub	SOAPRO (GRN)
Project for deposition and collection of solid waste and rehabilitation of ceramic facilities	Somague Engenharia
Plan for reconversion of urban waste system – Almada	Almada Municipality
Hazardous substances and hazardous waste management plan	SOAPRO (Nova Cimangola)
Waste Management Plan for Kwanza Sul cement factory	Soapro

WORKS SUPERVISION	
Supervision of construction of Pico Island landfill	AM Ilha do Pico
Condition assessment of Landfill I	Tratolixo

Contacts



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Frederico Monteiro is an Environmental Engineer, specialized in Sanitary Engineering, with over 25 years of experience in water and waste treatment in Portugal and abroad. He has been involved in major landfill, sorting, leachate treatment, WTP and WWTP projects. In 2026, he joined the Quadrante Group as Client Manager for the Waste and Water Utilities Business Unit, covering the Portuguese, Middle Eastern and African markets.



António Lorena
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António Lorena is an Environmental Engineer with 16 years of experience in waste management, circular economy, and public policies. He is Head of the Sustainability Business Unit at Quadrante Group and Managing Partner of 3drivers, where he has led strategic projects for public and corporate clients. He has played a key role in advancing circular economy policy in Portugal and has authored several scientific publications on waste management policies.



Olga Tello
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Olga Tello holds a degree in Civil Engineering from the University of Granada (Spain) and has completed an Executive Development Programme at the School of Industrial Organisation (EOI). She has more than 18 years of international experience in hydraulic projects, participating in all phases of the infrastructure life cycle, from design to operation and maintenance. She has led multidisciplinary and multicultural teams in Spain and the Middle East. Among her most notable projects are her contribution to the preparation of the 2022 World Cup and the implementation of flood prevention systems in Qatar.



Susana Serra
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Susana Serra is an Environmental Engineer with over 25 years of experience in Environmental Consultancy, specializing in Environmental and Social Studies, Impact Assessment, and project oversight. She has strong expertise in environmental licensing, stakeholder engagement, and international standards, with extensive experience in large-scale infrastructure and energy projects, particularly in Southern Africa. She is Deputy Head of the Environment Business Unit for the Portuguese, Middle Eastern and African markets.



Abílio Castro
Head of Business Sector - Sustainable Cities
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With a degree in Water Resources Engineering, Abílio Castro has over 20 years of experience in developing studies and projects related to hydraulics, sanitation and water resources, contributing to improving the quality of life of populations in different regions of the world. Throughout his professional career, he has managed large-scale, highly complex projects, leading multidisciplinary teams in areas such as wastewater and stormwater sanitation systems, water supply and distribution systems, hydroelectric power plants, water resource management and flood control.



Rodrigo Ferreira
Global Account Lead - Sustainable Cities Business Sector
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Rodrigo Ferreira is a Biophysical Engineer with over 24 years of international experience in environmental consulting across the power, infrastructure, oil & gas, and mining sectors. He specializes in E&S risk analysis, project and business development, and sustainable finance, with a portfolio of more than 180 projects. He has held senior roles in Mozambique, South Africa, Brussels, and currently serves as Global Account Lead for the Sustainable Cities Business Sector and Head of the Environment Business Unit.



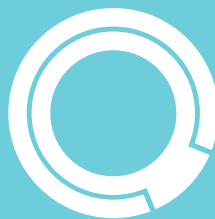
Tiago Pereira
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With a degree in Civil Engineering, specialised in Structures, from Instituto Superior Técnico (IST), Tiago Pereira has been with the Quadrante Group since 2020 and currently works as Head of the Industry Business Unit. He has over four years' experience in the development and coordination of industrial and infrastructure projects, from preliminary and conceptual studies through detailed engineering to on-site technical assistance. His experience includes substations, buildings and industrial facilities in the Oil & Gas, light and heavy industry, and water supply and treatment sectors. In terms of coordination, he was involved in the licensing of the Repsol Polímeros Refinery extension and the BIM-developed Lithium Battery Gigafactory project, both in Sines, Portugal.



Cyro Bernardes
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Cyro Bernardes Junior holds a degree in Chemical Engineering from the Polytechnic School of USP (Brazil), with a specialisation in solid waste (JICA, Japan), a Master's degree from the University of Texas at Austin and a PhD in Hydrogeology from USP. He has over 35 years of experience in the environmental and sanitation sectors, including more than 10 years as an environmental regulator. He has held management positions in environmental consulting, focusing on solid waste, contaminated areas, technological innovation, and sanitation projects, such as municipal plans and wastewater treatment plants.



QUADRANTE