PANDO

AI VALORIZA



IT - PANDO VALORIZA SERVICIOS MEDIOAMBIENTALES



1. Sovereignty, Governance, and Regulatory Compliance

- We require technological independence to adapt our AI solutions to evolving regulatory frameworks, such as the EU AI Act, without relying on a third-party provider whose roadmap may not align with our industry or specific use cases.
- We control the entire data lifecycle, from ingestion to exploitation, allowing us to implement tailored security, audit, and explainability policies, including full traceability and adherence to our internal compliance rules.
- Avoiding vendor lock-in is critical to preserving strategic decision-making power. Our AI layer must serve our business, not that of a global platform with diverging priorities.

2. Internal Scalability and Personalization

- Our AI must not be a black box. We need the ability to audit, customize, and evolve models and their behavior without being tied to external update cycles.
- The modular architecture we are building allows seamless integration of emerging language models (open source or commercial) without reengineering, keeping us competitive and agile.
- We can build a semantic layer over our internal ontologies and systems (e.g., SharePoint, GIS, Fabric, LOGA), giving us performance, context, and accuracy advantages over generic models.

3. Democratization, Efficiency, and Data Culture

- We empower end users, not just technical profiles, enabling anyone in Valoriza to access the information they are entitled to—smartly and without friction or dependency on technical support.
- Al should be a copilot for all—not a luxury for a few. From our support center (CAU) to service managers and tendering teams, all should have agents tailored to their needs.
- This approach not only improves operational efficiency but nurtures a datadriven, innovation-ready organization.

4. Transparency and Innovation in Public Services and Tenders

- Our Al must be usable in public tenders, free from proprietary license constraints or hidden costs, giving us a direct competitive edge over closedplatform-dependent operators.
- Use cases like the tow service or visual vehicle recognition powered by Al already prove the value of tailored, business-aligned solutions.
- Offering our own AI strengthens the Valoriza brand as a leader in open and responsible innovation.





5. Security, Reputation, and Control

- Preventing reputational risks from leaks, inappropriate responses, or misuse of Al requires an internally governed system with clear, role-based user rules.
- We incorporate early detection for hallucinations, prompt injection attacks, malicious behavior, and sentiment analysis—capabilities that would be difficult or expensive to implement using closed systems like Foundry.

6. Ecosystem and Legacy Integration

- Our Al layer is already designed to integrate with systems like LOGA, IRIS, GIS, Fabric, Ariba, and SharePoint—without costly redesign or compatibility constraints.
- Unlike monolithic solutions, our approach is interoperable, evolutionary, and plug-and-play with our existing infrastructure.

7. Organizational Agility and Time-to-Value

- In an environment where innovation can't wait, we need AI that evolves at the pace of business—not according to quarterly updates from a global vendor.
- Our internally developed and governed AI layer allows us to iterate rapidly, launch functional MVPs in weeks, and adapt agents to new services or operational needs frictionlessly.
- We can pivot between models (GPT-4, DeepSeek, Mistral, LLaMa, Phi, etc.)
 without undergoing external certifications or validations—maintaining speed as a competitive edge.
- Instead of relying on distant roadmaps or support tickets, we have immediate response capability within our own innovation team, maximizing ROI and minimizing operational risk.
- This agility also lets us incorporate direct user feedback—from field operators to analysts—and fine-tune AI copilots to their specific realities, drastically shortening improvement cycles.

8. Responsible Governance and Strategic Partnerships

- We've already launched our AI governance framework—based on explainability, fairness, security, and accountability—in alignment with the EU AI Act, and developed in collaboration with the Barcelona Supercomputing Center (BSC-CNS) and NeuralTrust, at no cost to the company.
- This partnership enables the design of modular, ethical, and auditable governance that is not dependent on proprietary platforms but rather on open standards and validated scientific approaches.





- We implement internal controls for data quality, algorithmic decision traceability, risk classification, role-based access segmentation, and activity logging.
- We position ourselves as one of the first companies in urban services to deploy a governed and open AI strategy—usable in other cities or projects as part of our innovation offer.
- With this model, AI is not a black box but a trustworthy tool—defendable before auditors, public clients, and end users.

9. Strategic Funding Through R&D Projects

- Our Al architecture is not only modular and scalable but also eligible for cofunding through national and European innovation programs (CDTI, Horizon Europe, PERTE, etc.), as we've successfully done in past initiatives.
- We can accelerate development of key components—vertical copilots, explainability frameworks, bias validation tools, security sandboxes—without relying 100% on internal funding.
- This turns potential cost into an opportunity for financial and reputational leverage, connecting us with high-level public and academic ecosystems.

🚺 SWOT – Proprietary Al Development at Valoriza

Strengths

- Active, ethical, and responsible AI governance in collaboration with BSC and NeuralTrust.
- Full technological independence: no dependency on third-party roadmaps (e.g., Palantir).
- Seamless integration with corporate stack (LOGA, GIS, Fabric, SharePoint).
- Modular and open architecture compatible with multiple LLMs (GPT, Mistral, Phi, etc.).
- Agile deployment and evolution: fast MVPs, iterative improvements, direct user feedback.
- EU Al Act alignment and adaptability to future regulations.
- Real-world use cases with tangible returns (tow service, CAU, visual reporting, etc.).
- Scalability across cities and services.





Opportunities

- R&D co-funding to accelerate strategic components (copilots, ethics, sandboxes).
- Competitive differentiation in public tenders by offering transparent, proprietary Al.
- Strong alliances with public and academic institutions.
- Expansion into new services (parks, waste, mobility, urban maintenance).
- Participation in European consortia and national strategic projects.
- Potential to scale AI services to citizens and suppliers as a public offering.

Weaknesses

- Requires sustained investment in governance, evolution, and maintenance.
- Lower short-term maturity compared to turnkey solutions like Foundry.
- Dependency on internal talent and innovation team capabilities.
- Additional effort needed for internal adoption, communication, and training.
- Internal evangelization required to highlight benefits over well-known platforms.

Threats

- External pressure to adopt proprietary solutions from stakeholders or partners.
- Rapid growth of closed platforms that dominate market and public perception.
- Regulatory changes introducing new burdens for in-house AI development.
- Risk of technological lag if innovation pace is not maintained.
- Challenges in sustaining governance and traceability without more resources.



Pando (SoflA) in Valoriza – June 2025 Overview

Intelligent Infrastructure Pando acts as Valoriza's central conversational Al layer, connecting internal knowledge, corporate tools, external APIs, and advanced LLMs for:

- Natural language conversational queries
- Smart task automation
- Specialized operational support (CAU, HR, towing, fleet...)
- Interaction via Teams, web, and REST API endpoints

Technical Components

Component	Production Examples
LLMs in use	sofia-azure-gpt-4o, pando-claude-3.7, sonar, deepseek, phi, mistral
API Tools	iris (real-time fleet, maintenance, and fuel usage tracking)
RAG Tools	rrhh-bd-personas-v2 (lookup by name), rrhh-bd-personas-v3 (by cost center), help-manuales, CAU, CIO Office
Key Routes	rrhh, vehicles, iris, help, reasoning, towing, data analysis, citizenship, training, strategy
Traceability	NeuralTrust (prompt auditing, usage logging, security monitoring)
Access Control	Role-based access (Keycloak + Entra ID via LOGA)



Live Use Cases & Prompt Examples

→ HR Management

- Look up employee contact by name
 Prompt: "What is Cristina Gómez's email and phone number?"
- Get employees by cost center
 Prompt: "Show me all employees from center 5000402.ES.2003-Limpieza Viaria y Reco Bcn"

Wehicle Copilot – Towing Service

Vehicle detection by image (brand, model, plate, damages)
 Endpoint: https://pando.valorizasm.com/raw/copilot/vehiculos
 Prompt: "Analyze the following vehicle images" + base64 image
 Output: JSON with brand, model, car_plate, detected_damages

* Fleet and Machinery – IRIS

- Vehicle location
 Prompt: "Where is sweeper SM-245?"
- Active inspections of a machine
 Prompt: "List pending inspections for vehicle 3070JBS"
- Maintenance history
 Prompt: "What maintenance has been performed on machine 4078HWJ in the last 6 months?"

CAU Support and Manuals

Instruction lookup
 Prompt: "How do I close an incident in the mobility portal?"
 Tools: help-manuales, CAU

Strategic Support and Training

- Innovation roadmap consultation
 Prompt: "What are the strategic lines of the Smart Cáceres project?"
- Guided learning
 Prompt: "Show me step-by-step how to create a Dataflow in Fabric linked to SharePoint"

Advanced Governance and Traceability

- All interactions are logged and auditable via NeuralTrust, with ethical validation, hallucination control, and sensitivity thresholds.
- Reinforced security via role-based tool and route access, integrated with Entra ID and business logic from LOGA.

