

# Municipal Water, Wastewater and Solid Urban Waste Services of Torres Vedras — Portugal

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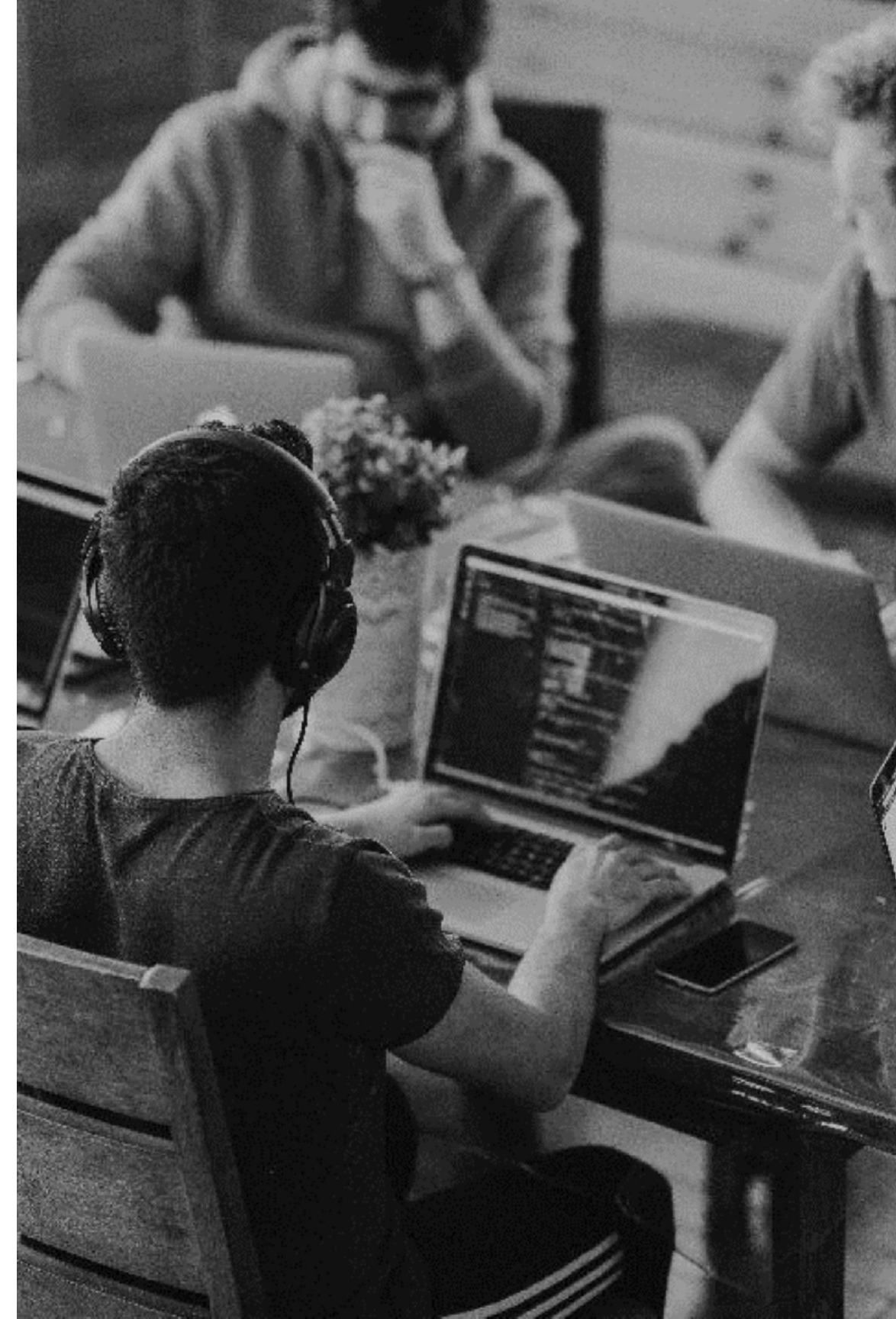
Purpose: Brief municipal officials and consortium partners on SMAS de Torres Vedras' context, readiness, and proposed GenAI-enabled collaboration to improve service reliability, operational efficiency, and citizen experience—aligned with EU frameworks (GDPR, AI Act, NIS2).



# Who We Are & Why It Matters

**SMAS de Torres Vedras (Portugal)** is a municipal public utility providing drinking water, wastewater, and solid urban waste services across ~407 km<sup>2</sup> to ~85,800 residents, spanning coastal and rural terrain. We operate ~100 storage reservoirs and expanding telemetry/SCADA, placing us within **NIS2** scope for critical infrastructure.

- Consolidated systems: GIS/asset registry, billing/CRM, SCADA/telemetry, and document control.
- Key challenges: 24/7 continuity over hilly topography, reducing non-revenue water, and multichannel citizen service.
- Vision: Join a consortium to deploy **trustworthy GenAI** with privacy- and security-by-design—governed for **GDPR, AI Act, NIS2**—integrated to GIS/SCADA/CRM to boost efficiency and resilience.



# What We Offer the Consortium—and What We Seek

## Our Contributions

- Live testbed across water, wastewater, and solid waste with mixed urban/rural contexts and critical assets.
- Multidisciplinary teams: Operations, IT/Digital, GIS/Assets, Legal, Billing/CRM, HR/H&S—results-focused leadership.
- Diverse data: SCADA/telemetry, GIS, billing/CRM, incidents, service tickets, regulatory docs—maturing data governance.
- Compliance-by-design: GDPR, AI Act, NIS2, risk registers, DPIA, records of processing, BCP/DRP in rollout.
- Technology integration: municipal on-prem/sovereign cloud, APIs/ETL, IoT/LoRaWAN—pilot-ready for RAG/RPA/LLM.
- Measurement & scale: baselines and KPIs (losses, MTTR, service times, CSAT), replication plan for other utilities.

## What We Need

- Technical/scientific coordination and project control (WPs, risk, QA, audits).
- Secure GenAI architecture (on-prem/sovereign cloud), LLM/MLOps, guardrails, retrieval, and automation.
- Data governance & interoperability: synthetic data/PII anonymization; API/ETL with GIS, SCADA, CRM, DMS.
- Compliance, ethics, explainability: DPIAs, bias mitigation, human-in-the-loop.
- Cyber-resilience & continuity: IT/OT segmentation, BCP/DRP tests and exercises.
- Inclusion & reuse: WCAG 2.2 AA channels, accessible UX, adoption playbooks for municipalities.