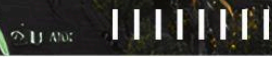




amplía)))
iiot

PROJECT PORTFOLIO

*Empowering smart decisions
through connected intelligence*



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About amplía)))



Amplía Soluciones S.L. is a technology company specialized in the development and deployment of advanced IoT and data-driven solutions for industrial and critical infrastructures. Founded in **2002**, amplía))) has over two decades of experience in digital innovation, with a strong international presence and a history of participating in large-scale projects across Europe and beyond.

At the core of our technological offering is **OpenGate**, a highly scalable and modular IoT platform designed to manage the complete lifecycle of connected assets—from device integration and data ingestion to analytics, control, and business process orchestration. OpenGate enables organizations to accelerate innovation, enhance operational efficiency, and unlock new business models through real-time, secure, and actionable data.

One of our flagship international contributions has been to the **Smart Metering Implementation Programme (SMIP)**, an initiative led by the UK Government to digitalize the country's utility infrastructure. Through OpenGate, Amplía))) successfully integrated and managed **over 35 million smart devices**, demonstrating our capacity to operate at the highest standards in critical, high-volume environments.

We actively participate in European collaborative programs—especially in **Innovation Actions (IA) and Research and Innovation Actions (RIA)**—where we contribute technological leadership and a highly effective, versatile approach to complex project environments.

Our commitment to excellence is reflected in our certification in internationally recognized standards:

- **ISO 9001** – Quality Management Systems
- **ISO 27001** – Information Security Management Systems

These certifications ensure the delivery of robust, secure, and high-quality solutions across all our services.

Project Summary Table



Project Name	Sector	Key Technologies	Duration	Type
SecBluRed	Industrial IoT / Cybersecurity	AI/ML, Blockchain, 5G, UEBA	2022–2025	R&D (CDTI)
Demeter	Agriculture / AI & IoT	Edge Computing, ML	2023	R&D (Eurostar)
E-MEWS	Natural Hazards / IoT	ML, Edge, Environmental Sensing	2020–2023	R&D (Eurostar)
Eco CPD	Energy Efficiency / Buildings	IoT Sensors, Smart HVAC	2010–2013	R&D (Avanza I+D)
GEMOVEL	Electric Mobility	IoT, User Interfaces	2010–2013	R&D (Avanza I+D)
Domocell	Smart Charging / Energy	IoT Platform, Access Control	2009–2012	R&D (Avanza I+D)
SLIM	Occupational Safety / Logistics	Wearables, Wireless Sensors	2009–2012	R&D (Avanza I+D)
ENERSIP	Smart Energy / Buildings	Adaptive Control, Real-Time Data	2010–2012	R&D (FP7)
UK Smart Metering	Utilities / Mass IoT	OpenGate, AMI/MDM Integration	Ongoing	Private Client
Madrileña Red de Gas	Utilities / Gas	Remote Ops, SIM Management	Ongoing	Private Client
Smart Water Metering	Smart Cities / Utilities	WMBus, Gateway Management	Ongoing	Private Client
Railway Smart Grid (ADIF)	Transportation / Energy	SCADA, Smart Grid, IoT Vertical	Ongoing	Private Client
Hospital Autoclaves	Healthcare / Maintenance	Predictive Analytics, Edge	Ongoing	Private Client

Project Name	Sector	Key Technologies	Duration	Type
Wind Farm Management	Renewable Energy	CMDB, Remote Ops, IoT	Ongoing	Private Client
EDAR Wastewater Plants	Utilities / Environment	Multi-system IoT Integration	Ongoing	Private Client
Vehicle Tracking (Plants)	Automotive / Logistics	Geolocation, Mobile App	Ongoing	Private Client
Construction Monitoring	Infrastructure / Safety	Real-time Tracking, KPIs	Ongoing	Private Client
Submetering (Buildings)	Energy / Real Estate	Multi-device, Energy KPIs	Ongoing	Private Client
Semi-Trailer Tracking	Logistics / Shipping	GPS, Analytics, Alerts	Ongoing	Private Client
SEI2T	Industrial / Cybersecurity	AI, Edge, Deepfake Detection	Ongoing	Private Client

European R&D Projects



SecBluRed



Duration: 2022–2025 (Currently)

Programme: CDTI Missions – RIA

Sector: Industrial IoT / Cybersecurity / 5G

Description:

SecBluRed is a collaborative R&D project focused on building secure Industrial IoT (IIoT) systems. It addresses future challenges through the use of 5G, post-quantum cryptography, self-sovereign identity, blockchain, AI/ML, and secure architectures.

Objectives:

- Research next-generation cybersecurity architectures for IIoT.
- Integrate 5G and AI/ML technologies for anomaly prediction.
- Develop User and Entity Behavior Analysis (UEBA) models.

Amplía's Role:

- Design of an IoT framework with AI/ML for data processing.
- Modeling and training of UEBA algorithms for anomaly detection.
- Contribution to secure system architecture in IIoT contexts.



Demeter



Duration: 2023 -

Programme: Eurostars 3 – Call 3

Sector: Agriculture / AI & IoT

Description:

Demeter applies IoT and AI to improve extensive livestock and wildlife management in rural areas. It combines location tracking, health monitoring, and predictive analytics to promote sustainability and productivity.

Objectives:

- Provide real-time enriched data for decision-making in rural farming.
- Enable animal welfare tracking and predictive alerts.
- Improve use of natural resources via intelligent monitoring.

Amplía's Role:

- Development of edge computing architecture.
- Provision of OpenGate IoT Platform with AI/ML capabilities.
- Training ML models for animal comfort and behavior analysis.



E-MEWS



Duration: 2020–2023

Programme: Eurostars

Sector: Natural Hazards / Environmental Monitoring

Description:

E-MEWS provides an early-warning system for landslides and snow avalanches, aiming to increase safety and reduce loss through predictive monitoring of terrain movement.

Objectives:

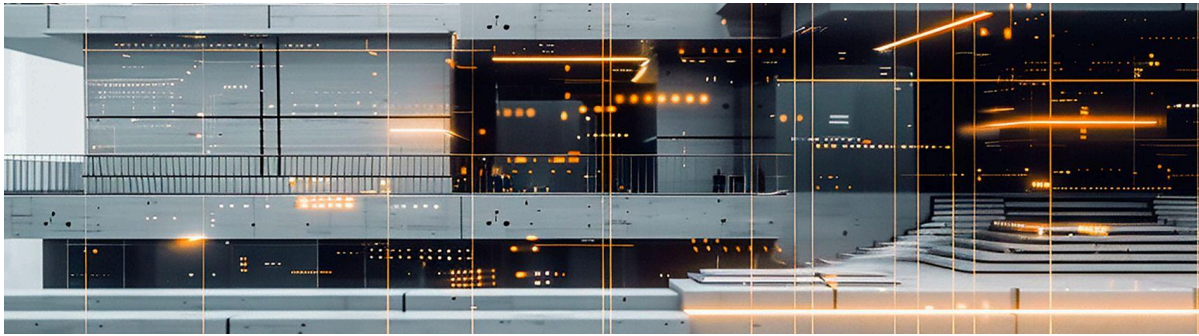
- Improve risk prediction for natural disasters.
- Collect and process data from snow and terrain sensors.
- Provide real-time alerts based on AI-powered risk models.

Amplía's Role:

- Design of a distributed IoT architecture with edge computing.
- Deployment of an AI-enhanced data processing platform.
- Development of ML models for avalanche behavior forecasting.



Eco CPD – Energy Efficiency in HVAC Systems



Duration: 2010–2013

Programme: Plan Avanza2 (Spain)

Sector: Energy Efficiency / Smart Buildings

Description:

Eco CPD developed an intelligent, wireless monitoring and control platform for temperature and humidity in data center environments. The aim was to reduce energy consumption through real-time automation.

Objectives:

- Optimize HVAC system efficiency using real-time data.
- Integrate environmental sensors via wireless networks.
- Enable preventive maintenance through performance monitoring.

Amplía's Role:

- Design and development of the IoT-based monitoring platform.
- Wireless sensor integration and control interface.
- Analytics for environmental optimization.



GEMOVEL – Electric Vehicle Smart Management



Duration: 2010–2013

Programme: Plan Avanza2 (Spain)

Sector: Electric Mobility / Smart Cities

Description:

GEMOVEL focused on supporting electric vehicle adoption by offering users digital services for real-time control, charging, and vehicle status monitoring.

Objectives:

- Facilitate user interaction with electric vehicles.
- Manage energy consumption and charging behavior.
- Integrate location, usage data, and value-added services.

Amplía's Role:

- IoT platform for EV management and data unification.
- User interface development for remote interaction.
- Charging station integration and monitoring.

Partners:

Neoris, Polytechnic University of Valencia, Epoche and Espri, among others.



Domocell – Residential EV Charging



Duration: 2009–2012

Programme: Plan Avanza2 (Spain)

Sector: Smart Energy / Residential Mobility

Description:

Domocell developed an integrated platform for managing EV charging stations in shared residential garages, supporting secure access and efficient energy use.

Objectives:

- Enable smart charging in community parking areas.
- Ensure secure and efficient energy management.
- Provide real-time status and remote configuration options.

Amplía's Role:

- Design of residential EV charging platform.
- Remote monitoring and access control via OpenGate.
- Utility system integration and user dashboarding.

Partners:

Gas Natural Fenosa (Naturgy), among others.



SLIM – Smart Safety for Intermodal Terminals



Duration: 2009–2012

Programme: JSIP (International)

Sector: Occupational Safety / Logistics / Smart Wearables

Description:

SLIM aimed to improve worker safety in intermodal container terminals using wearable technologies, wireless communication, and real-time data processing to detect and prevent accidents.

Objectives:

- Enhance workplace safety using smart textiles and sensor integration.
- Provide real-time detection of hazardous conditions.
- Reduce accidents through early warnings and alerts.

Amplía's Role:

- IoT platform development for sensor integration and data processing.
- Real-time alert system based on contextual and environmental data.
- Coordination with wireless networks and smart clothing.



ENERSIP – Adaptive Energy Management System



Duration: 2010–2012

Programme: FP7 – ICT (European Union)

Sector: Smart Energy / Smart Buildings

Description:

ENERSIP created a customizable and adaptive energy management platform for residential, commercial buildings, and neighborhoods, integrating energy, IT, and control systems.

Objectives:

- Coordinate energy usage across multiple domains in real time.
- Empower users with consumption data and energy behavior insights.
- Enable efficient control of energy through smart services.

Amplía's Role:

- Design of distributed architecture with intelligent nodes.
- Centralized data acquisition and analytics platform.
- User feedback integration for energy-saving recommendations.



Private Sector Projects



UK Smart Metering – National Deployment



Client: Confidential – Major UK Utility

Duration: Ongoing

Sector: Utilities / Smart Energy / Mass IoT

Description:

Amplía))) has deployed its OpenGate platform as part of the UK's nationwide smart metering rollout, managing over 35 million smart gas and electricity meters. The platform ensures remote operations, lifecycle management, diagnostics, and proactive maintenance.

Objectives:

- Secure and scalable management of millions of utility meters.
- Support for device provisioning, updates, and diagnostics.
- Real-time data collection and integration with utility backend systems.

Amplía's Role:

- Full deployment and operation of OpenGate IoT Platform.
- Management of SIMs, devices, and field technician support.
- Integration with MDM and customer service systems.

Outcomes:

- Over 35 million devices managed.
- Unified platform across multiple technologies and vendors.
- Remote firmware updates and real-time anomaly detection.

Madrileña Red de Gas – Gas Metering Management



Client: Madrileña Red de Gas
Duration: Ongoing
Sector: Utilities / Smart Infrastructure

Description:

Amplía))) manages the gas metering infrastructure for Madrileña Red de Gas, serving over 900,000 residential and industrial clients. The platform supports remote operations, integration with Enagás, and multi-vendor compatibility.

Objectives:

- Enable daily automated gas meter readings.
- Provide remote diagnostics and valve control.
- Support mobile applications for field technicians.

Amplía's Role:

- Integration of OpenGate with internal operational systems.
- Real-time monitoring and management of gas meters.
- Coordination with national gas operator Enagás.

Outcomes:

- Improved operational efficiency and service accuracy.
- Reduced need for field interventions.
- Scalable infrastructure for future growth.

Water Utility – Smart Metering in Major Spanish City



Client: Confidential – Municipal Utility

Duration: Ongoing

Sector: Water / Smart Cities

Description:

OpenGate manages water meter data collection through gateways using WMBus communication. The solution supports multivendor integration, real-time diagnostics, and remote firmware updates, reducing costs and improving service quality.

Objectives:

- Automate water meter data collection and monitoring.
- Manage concentrators and gateways from a central platform.
- Configure alarm rules for device status, battery, and signal.

Amplía's Role:

- Unification of multiple device brands via Connector Factory.
- Remote operations and firmware updates.
- Integration with customer service platforms via API.

Outcomes:

- Reduced field visits through remote diagnostics.
- Centralized control of the water metering infrastructure.
- Support for scalable and flexible smart city deployment.

Railway Smart Grid – ADIF



Client: ADIF (Administrador de Infraestructuras Ferroviarias – Spain)

Duration: Ongoing

Sector: Transportation / Smart Energy / Infrastructure

Description:

Amplía))) developed and deployed a vertical solution on top of OpenGate for monitoring energy consumption across Spain's high-speed rail infrastructure. The solution enables smart grid management, supports energy audits, and improves reliability through data centralization.

Objectives:

- Monitor and control energy usage across railway networks.
- Enable fault detection, quality control, and optimization.
- Support decarbonization and predictive maintenance strategies.

Amplía's Role:

- Horizontal platform deployment (OpenGate) and custom vertical.
- Integration with SCADA, telecontrol, and IEC 60870-5-102 protocols.
- Support for demand optimization and billing to high-speed operators.

Outcomes:

- Real-time monitoring of railway energy infrastructure.
- High-level architecture for multi-system integration.
- Improved energy efficiency and maintenance planning.

Hospital Autoclaves Monitoring



Client: Confidential – Hospital Group

Duration: Ongoing

Sector: Healthcare / Predictive Maintenance / Industry 4.0

Description:

OpenGate is used to remotely monitor autoclave sterilizers in hospitals, allowing for automatic performance data collection, real-time alerts, and predictive diagnostics based on machine behavior.

Objectives:

- Collect data on autoclave activity and operating conditions.
- Detect wear and potential failures before they occur.
- Improve maintenance operations and reduce unplanned downtime.

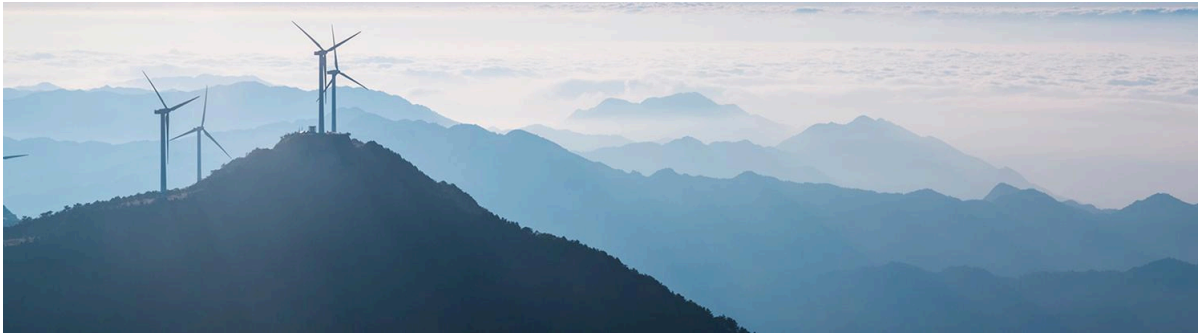
Amplía's Role:

- Integration of autoclave data into OpenGate.
- Predictive analytics for maintenance and part replacement.
- Centralized monitoring dashboard for hospital technicians.

Outcomes:

- Enhanced safety and equipment reliability.
- Reduced maintenance costs and downtime.
- Improved quality assurance in hospital sterilization processes.

Wind Farm Digital Asset Management



Client: Confidential – Wind Energy Operator

Duration: Ongoing

Sector: Renewable Energy / Remote Operations / Communications

Description:

OpenGate supports the monitoring and maintenance of the communications and control infrastructure in wind farms (onshore and offshore). The solution includes CMDB building, diagnostics, and knowledge-based operation optimization.

Objectives:

- Maintain communication and control systems for WTG components.
- Create a centralized configuration and diagnostics repository.
- Optimize support procedures and remote operations.

Amplía's Role:

- Management of networking and SCADA elements.
- Generation and maintenance of a digital CMDB.
- Coordination of diagnostics and incident response workflows.

Outcomes:

- Optimized maintenance procedures (on-site and remote).
- Structured knowledge base and remote operation support.
- Increased asset visibility and operational efficiency.

EDAR – Smart Wastewater Treatment Management



Client: Confidential – Public Utility

Duration: Ongoing

Sector: Environmental Services / Utilities / Smart Industry

Description:

Amplía))) implemented OpenGate in wastewater treatment plants (EDARs) to unify and digitize operations across diverse internal systems (PLCs, SCADAs, sensors). The platform centralizes monitoring and control, supporting multi-site management.

Objectives:

- Integrate and monitor multiple EDAR facilities under a unified platform.
- Generate operational and process-level indicators.
- Enable remote control and optimization of treatment processes.

Amplía's Role:

- Integration of heterogeneous systems with OpenGate.
- Generation of KPIs and dashboards for process and environmental data.
- Remote configuration and diagnostics capabilities.

Outcomes:

- Unified management of decentralized water treatment operations.
- Better decision-making through global performance metrics.
- Reduced operational cost through automation and visibility.
-

Vehicle Tracking in Industrial Plants



Client: Confidential – Automotive Manufacturer

Duration: Ongoing

Sector: Automotive / Logistics / Tracking

Description:

OpenGate enables real-time location tracking of vehicles in large automotive yards where unfinished or failed units await processing or repair. The solution streamlines logistics, repair routing, and vehicle availability.

Objectives:

- Provide real-time tracking of units across staging areas.
- Reduce time to locate and process each vehicle.
- Improve analytics on repair cycles and performance.

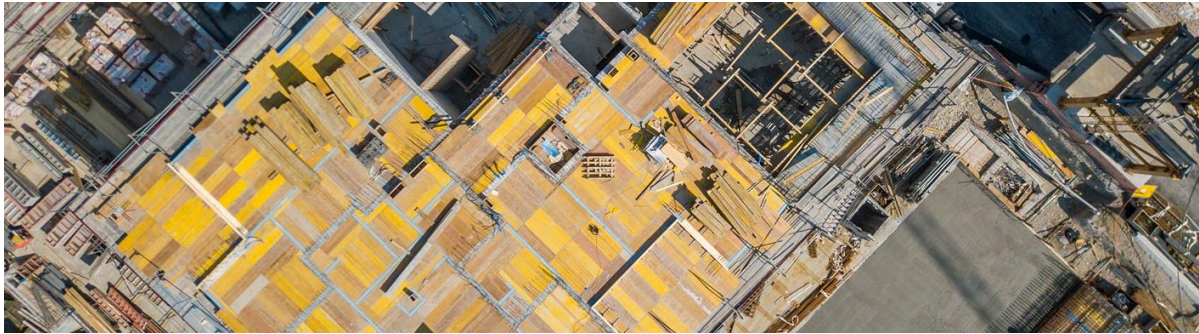
Amplía's Role:

- Integration of GPS and sensor data into OpenGate.
- Android app and web tool for visual tracking and reporting.
- Analytics for time, error types, and repair processes.

Outcomes:

- Faster turnaround for vehicles in rework or QA stages.
- Improved visibility over yard operations.
- Reduction in location and handling errors.

Construction Site Monitoring



Client: Confidential – Infrastructure Developer

Duration: Ongoing

Sector: Construction / Safety / IoT

Description:

Amplía))) deployed OpenGate to monitor assets and personnel at active construction sites. The platform provides real-time location, risk alerts, and site productivity statistics, improving safety and efficiency.

Objectives:

- Track worker and asset location in real time.
- Analyze site risks and improve safety awareness.
- Monitor project progress through connected devices.

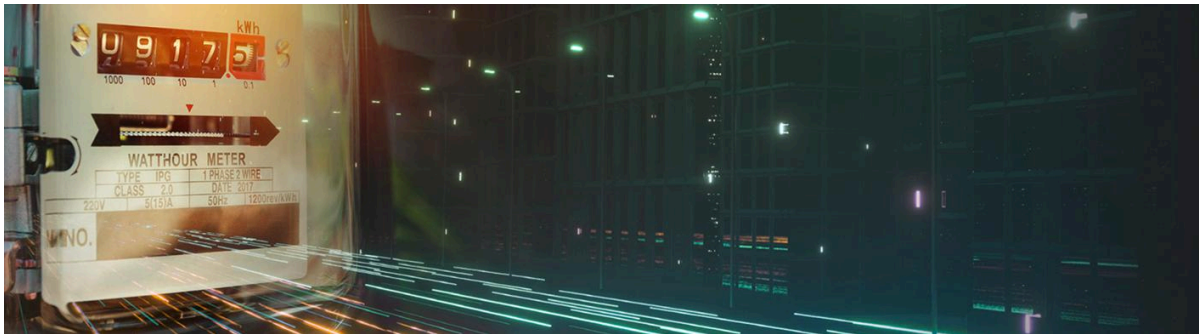
Amplía's Role:

- Asset inventory and location system integration.
- Real-time dashboards and alerts for site managers.
- Statistics on worker safety, movements, and task tracking.

Outcomes:

- Reduced safety incidents through proactive alerts.
- Improved site productivity with real-time supervision.
- Cost savings via optimized asset usage and control.

Smart Building Submetering



Client: Confidential – Facilities Management Group

Duration: Ongoing

Sector: Energy / Real Estate / Smart Buildings

Description:

OpenGate is used to collect and analyze energy consumption data across commercial buildings through submetering systems. The platform supports multi-utility, multi-device setups and generates real-time energy KPIs.

Objectives:

- Enable granular energy monitoring per zone or usage point.
- Provide automated energy efficiency reports.
- Integrate with building management systems (BMS).

Amplía's Role:

- Integration of submeters and sensors into OpenGate.
- Development of KPIs and benchmarking dashboards.
- Real-time alerts and maintenance scheduling tools.

Outcomes:

- Improved energy visibility and efficiency in buildings.
- Support for sustainability certifications and audits.
- Centralized energy data platform across assets.

Semi-Trailer Tracking – Maritime Logistics



Client: Confidential – Shipping Company

Duration: Ongoing

Sector: Logistics / Asset Tracking / Transport

Description:

A maritime shipping company uses OpenGate to track semi-trailers on modular vessels and throughout delivery chains. The system improves asset utilization and reduces losses in large logistics environments.

Objectives:

- Provide real-time geolocation of containers and trailers.
- Generate usage statistics and identify idle time.
- Optimize rotation and reduce material loss.

Amplía's Role:

- Integration of location data with centralized analytics.
- Development of tracking dashboards and alert rules.
- Reporting for operational efficiency and logistics planning.

Outcomes:

- Reduced trailer loss and improved container cycle times.
- Enhanced customer service through location transparency.
- Data-driven optimization of shipping routes.

SEI2T – Security in Industrial Environments with IoT Intelligence



Client: MTP (Métodos y Tecnología de Sistemas y Procesos)

Duration: Ongoing

Sector: Industrial / Cybersecurity / IoT

Description:

SEI2T aims to design and productize a cybersecurity solution for IIoT environments, combining Artificial Intelligence and Edge Computing to detect threats, sabotage, and synthetic content across industrial infrastructures.

Objectives:

- UEBA-based behavioral anomaly detection with centralized AI.
- Local cybersecurity monitoring with edge AI for smart grids, wind farms, rail, etc.
- Visual diagnostics of installation activities using AI-powered image recognition.
- Classification of synthetic content vs. human content (deepfakes).
- Validation of AI models for resistance to adversarial threats and prompt injection.

Amplía's Role:

- Deployment of OpenGate IoT Platform for real-time data and behavioral analytics.
- AI model development for anomaly detection and deepfake classification.
- Edge integration across distributed industrial environments.
- Support for coordinated learning and secure operations.

Outcomes:

- Enhanced security intelligence across IoT infrastructures.
- Prevention of physical and digital tampering.
- Foundation for secure-by-design IIoT systems.

Contact Information



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