:TERRANOVA
INNOVATIONS FOR UTILITIES

TSG

CONTROL **ANY DEVICE** IN YOUR SMART GAS GRID

TSG (Terranova Smart Grid) is an innovative and highly configurable software platform. Specially designed for the gas, water and electricity sectors, TSG encourages a joined up and interactive approach to managing integrated smart distribution networks. Our solution is technology agnostic, removing barriers to proactive data monitoring, remote reading, and control of a variety of device types. Use TSG with smart regulators, data loggers, gas odorisers, sensors, cathodic protection devices, street lighting and much more. Benefit from a smarter distribution grid and use TSG to help your organisation make better decisions, achieve operational excellence and advance your digitalisation journey.

KEY COMPONENTS:

- **TSG (Gas)** – helping gas distributors control leakages, safeguard energy investments and protect the environment. Use TSG Gas to deliver your energy more safely and reliably with our highly versatile office or field-based applications. Improve smart grid responsiveness through precise monitoring and data collection, management of field-based devices, remote regulation, grid profiling, and much more.
- **TCS (Cathodic System)** – keep your existing gas pipeline infrastructure fit for purpose through cathodic protection. Use office or field based teams to closely manage and monitor a multitude of devices to minimise corrosion in your network, stay compliant with the latest safety regulations and protect your investment.
- **TSL (Smart Lighting)** – transform your street lighting infrastructure into a strategic backbone of your future IoT strategy. Take control of street lamps, traffic monitoring, pollution and noise sensors and more. Now your organisation can make smarter decisions, improve management of field-based assets, reduce energy costs and maintain a safer and healthier environment.

ADDING VALUE

- **Multi-vendor support** – one simple platform to manage multiple devices from different manufacturers.
- **Multi-service** – specially designed for use across the gas, water or electricity sectors, making it easier than ever to manage devices belonging to more than one company or service type.
- **Centralised Interface** – use just one highly initiative, fully configurable and responsive interface that supports your workflow whilst improving the user experience and drive down training costs.
- **Single hub:** TSG can be treated as a critical hub that can be easily integrated with so that other systems can take advantage of the data that it collects.
- **Decarbonise activities:** use a wide range of built in tools to exploit the advantages of remote device management. Decarbonise your operational activities through reduced site visits, collect larger volumes of data and wider range of data types. Different types of measures and alarms better inform field or office based corrective action.
- **Real-Time Monitoring** – use powerful KPI and diagnostic tools in the form of charts, dashboards and spatial analysis (GIS). Closely monitor device roll-out statuses, performance and readings availability, load balancing, and other key activities.
- **Planning Support:** simulation and diagnostic tools to monitor critical network points.
- **Maintenance Support:** perform data analysis and device diagnostics for a more organised and intelligent approach to preventive maintenance and anomaly resolution.
- **Multiple technology support** – support for communication technologies such as GSM, GPRS, RF, NB-IoT and others. We continually strive to bring our customers the benefits of tomorrow's technology, today. Exciting innovations pave the way for better wireless device communications through reduced battery consumption, improved coverage, and lower costs of managing network assets.
- **An integrated suite** – we offer a variety of complementary software components, making it easier for you to choose the right configuration to support your digitalisation journey.

CORE FUNCTIONALITY

- **Telemetry:** remote data collection, processing and transfer at different levels of granularity. TSG easily manages various measures including volumes, pressures, temperatures, flow, voltage, and many others.
- **Remote Management:** take control of your remote assets and issue powerful commands to quickly configure reading frequency, communication parameters, settings, and more.
- **Diagnostic and Alarms** – extensive array of diagnostic tools detect device malfunctions, data anomalies, event monitoring. Alarms can be configured by the user to define critical operational levels.
- **Auto alarm resolution** – a built-in engine for automatic resolution of specific alarm types. If device communication is lost, an alarm is raised and then cancelled when communication is restored.
- **Responsive Network Profiling:** tailor network flow and pressure regulation to meet the real-time consumption needs of consumers.
- **Network Self-Balancing:** use TSG to programme smart devices, regulators and data loggers to self-regulate the network according to the prevailing operating conditions. Choose whether devices respond globally or at a local level.
- **Graphic Analysis & GIS** – quickly perform meaningful data analysis with our selection of powerful tools and rapidly identify asset locations via map layers. Choose from a variety of clear graphical views and advanced reporting functions and export data to improve data driven decision making.
- **Local Interface** – use optical probe or Bluetooth to configure operating parameters of the device, view or download data an diagnostic registers, and perform firmware updates.
- **Communication bridge** – the TSG mobile app can recover data from malfunctioning field-based devices whilst temporarily restoring direct communications to central systems.

THE TERRANOVA WAY

At Terranova we believe that IT should positively enable your business and not impede it. Our expertise within smart grid means that our products and services are best suited to support your business processes. As a leading supplier to the utility sector we take complex processes and simplify them with powerful and highly versatile software solutions.

The Terranova design philosophy promotes the following:

- **Interoperability** – a true vendor-agnostic solution which means your organisation is free to choose the right device deployments and communication protocols. No more worries over procurement constraints or backward compatibility.
- **Modularity** – TSG is modular in design and highly configurable. This means that it can be tailored to meet your specific business needs as well as making it ideal for integration into complex legacy environments.
- **Scalability** – changing requirements shouldn't mean compromising software performance. Experience the immediate benefits of using TSG with the smallest device cohort before gradually rolling out over your entire smart grid deployment.
- **Security** – TSG is a highly versatile and powerful software solution which utilises the latest security measures. We work in partnership with one of the world's oldest and well-respected universities to eliminate vulnerabilities. Our advanced cyphering systems ensure that your data is protected. Communication channels are also secured for safer operation of front-end applications and devices. Finally, implementation is highly robust and includes authentication and user profiling.

Find out more about the benefits of partnering with Terranova to promote operational excellence, reduce overheads and create business value with solutions that support your digitalisation journey.