GANEX



OPTIMIZE, PROTECT, AND PRESERVE YOUR INVESTMENTS.

IT & OT SERVICES

Optimize, protect, and preserve your investments with resilient SCADA, monitoring, and cybersecurity systems designed to provide clear operational visibility and reliable performance.

GANEX

For **more than 20 years**, Ganex has helped energy asset owners improve **performance** through customized SCADA solutions, optimized maintenance, and innovative automation technologies. Our approach ensures higher performance while minimizing downtime.

Reliability is at the heart of our commitment. With extensive experience in renewable energy, we deploy robust, proven systems that ensure operational continuity, from industrial IT to cybersecurity.

Our knowledge of **NERC CIP** and relevant industry standards helps you identify gaps and address applicable requirements.

With our **24/7 operational control center**, your assets are continuously monitored. Continuous monitoring, proactive anomaly detection, and rapid response give you peace of mind, day and night.

Our professional and responsive teams tackle your operational challenges at every stage. We believe in the power of collaboration to build the future of your facilities together.

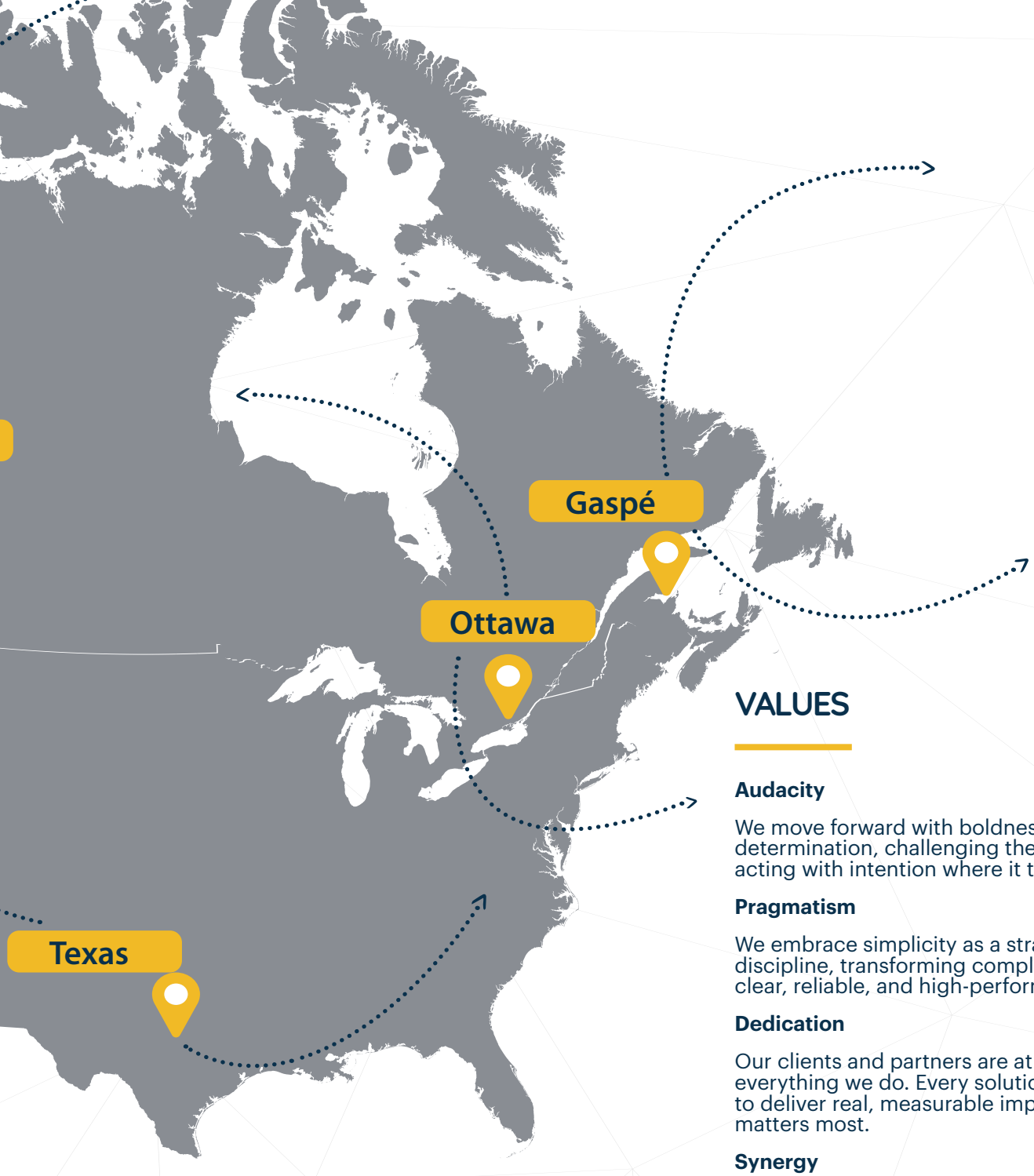
Because your success depends on systems that **perform reliably** and **securely**.



85 + NEW-BUILD RENEWABLE ENERGY PROJECTS COMPLETED

10 GW SOLAR, WIND, HYDROELECTRIC, AND ENERGY STORAGE

250 + MAINTAINED AND MONITORED SITES



VALUES

Audacity

We move forward with boldness and determination, challenging the status quo and acting with intention where it truly matters.

Pragmatism

We embrace simplicity as a strategic discipline, transforming complex systems into clear, reliable, and high-performing solutions.

Dedication

Our clients and partners are at the heart of everything we do. Every solution is designed to deliver real, measurable impact where it matters most.

Synergy

Performance is a collective effort, fueled by learning, shared experience, and the strength of our team.

SOLAR ENERGY

WIND ENERGY

WATER AND WASTEWATER

INDUSTRIAL & MANUFACTURING

ENERGY STORAGE

TRANSMISSION AND DISTRIBUTION

INDUSTRIES



SOLAR ENERGY

Solutions enabling every solar installation to operate efficiently and safely, while providing full visibility from day one.

We connect solar installations to digital monitoring and control platforms. Through IT/OT integration and our in-house Power Plant Controller (PPC), the collected data is analyzed in real time, enabling intelligent energy management and continuous performance optimization.



WIND ENERGY

Increase visibility across your wind turbines

In the wind energy sector, our SCADA solutions complement your existing systems. The operational gains they deliver are real and measurable.

With Ganex, you have a dedicated partner who understands that your success is measured in uptime, energy production, and tangible results.



ENERGY STORAGE

BESS assets that deliver stability, efficiency, and complete operational visibility

With tailored monitoring, a robust IT/OT architecture, and site-level control algorithms, owners can maximize availability, optimize charge and discharge cycles, and support safe, reliable operations.

At Ganex, we combine IT/OT expertise with deep SCADA knowledge to make energy storage a driver of performance, safety, and profitability.



INDUSTRIAL & MANUFACTURING

SCADA, automation, and IT/OT solutions for the manufacturing sector

Industrial facilities depend on reliable control systems, accurate data, and secure IT/OT infrastructure to maintain safe and efficient production. When systems become outdated, disconnected, or difficult to troubleshoot, operators face unexpected downtime, higher support costs, and reduced operational reliability.



WATER & WASTEWATER

Precision is essential in water asset management

Water and wastewater treatment facilities require continuous monitoring and precise control to operate safely and efficiently. Without reliable data and intelligent automation, organizations face increased operating costs, compliance risks, and unexpected downtime.



TRANSMISSION & DISTRIBUTION

Reliable transmission and distribution infrastructure starts with well-designed systems

Transmission and distribution networks are evolving rapidly, driven by growing demand, the integration of new critical loads, and increasingly stringent reliability and cybersecurity requirements. In this context, designing digital control systems from the construction phase is a key factor in ensuring long-term performance.



PROFESSIONAL IT/OT SERVICES

Every Ganex project is designed to deliver measurable results: smarter alarms, faster recovery, easier maintenance, enhanced protection, and optimized production.

Our Commitment

01 Maximize the availability of your IT/OT systems and production assets

02 Reduce downtime through proactive monitoring and rapid response

03 Protect the integrity of your data and support your facilities' compliance efforts, including NERC CIP requirements.

04 Stay by your side for the long term, with continuous optimization of your SCADA and IT/OT environments

SCADA

A well-planned SCADA implementation establishes a stable foundation for the entire asset lifecycle.

SCADA Retrofit

Plan your SCADA upgrade to improve asset efficiency, control, and access to real-time data.

Monitoring

Our goal is to ensure that your data is accessible, reliable, and secure.

Site Assessment

A solution to identify risks, facilitate compliance, and save time on preventive and corrective maintenance

Power Plant Controller (PPC)

A Power Plant Controller (PPC) is essential for meeting grid requirements, optimizing production, and coordinating the behavior of all generation equipment.

Disaster Recovery Plan

A disaster recovery plan (DRP) helps reduce prolonged downtime and the risk of critical data loss.

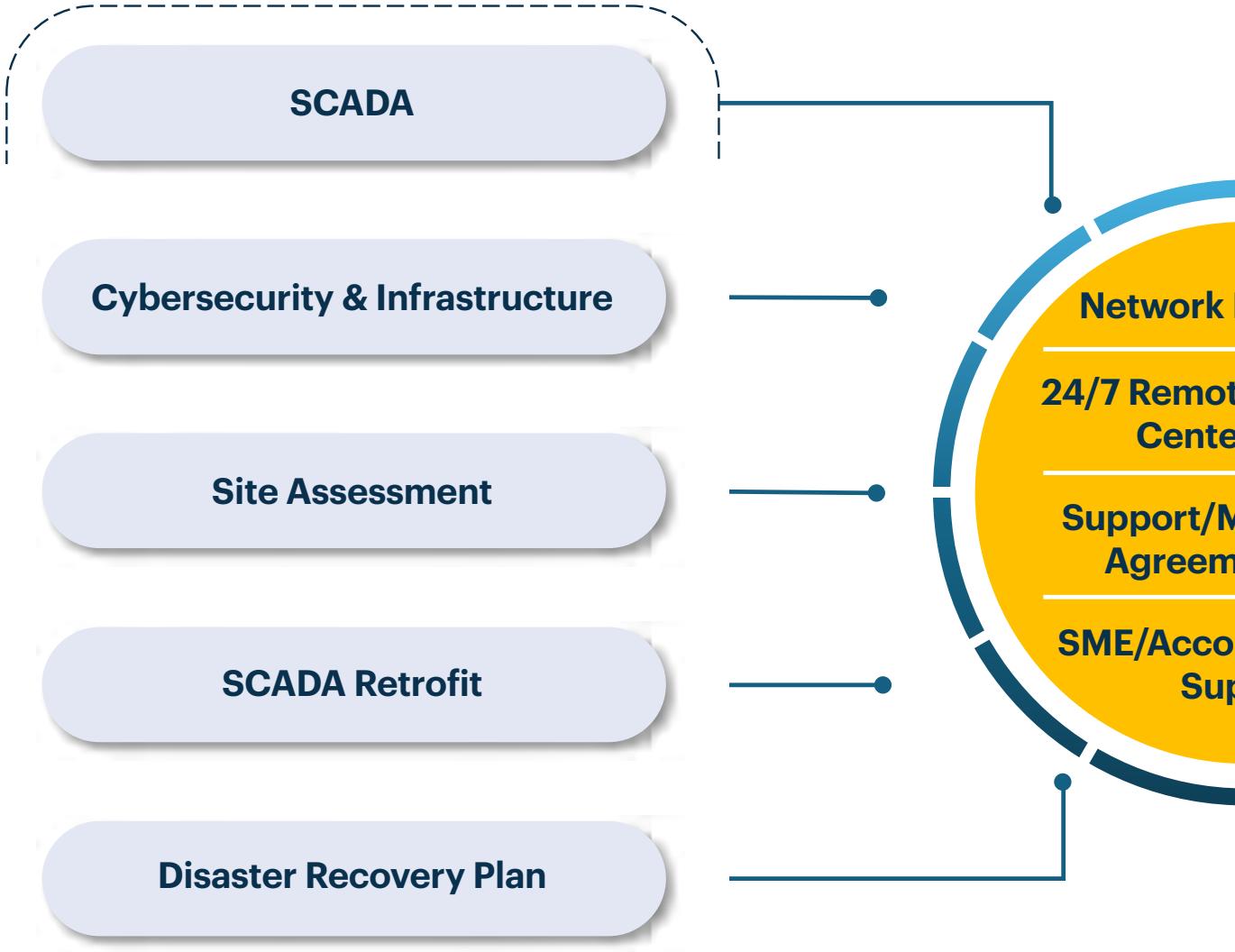
Cybersecurity & Network Infrastructure

Cybersecurity has become one of the industry's greatest challenges, with cyberattacks and supply chain security risks becoming increasingly common.

Asset Support & Services

Once a renewable energy asset is operational, its performance depends on how quickly issues are resolved, as well as the quality and efficiency of improvement and performance planning.

SUPPORT THROUGHOUT THE ASSET LIFECYCLE



Services & Products

At every stage, our IT/OT integration services and solutions are deployed to maintain the performance, availability, and compliance of your facilities.

Recurring IT & OT

At the heart of this lifecycle, remote control, and support governed by service-level ag continuous and proactive ov Our experts provide persona throughout every stage of th



- Maintenance
- Service Calls
- Emergencies
- Repairs
- New Requirements
- Hardware and Software Updates
- Vulnerabilities
- End of Life / End of Manufacturer Support

Monitoring

te Operations er (ROC)

Maintenance ment (SLA)

unt Manager pport

g/Ongoing Support

remote site monitoring, 24/7 and maintenance services greements (SLAs) ensure versight of energy assets. alized and strategic support he project.

Events

This integrated model optimizes the operation of renewable energy sites, enables proactive incident prevention, accelerates response to operational events, and maximizes the value and lifespan of energy assets.

SITE ASSESSMENT



Our site assessment approach focuses on generating actionable insights to enhance the safety and reliability of your infrastructure through cost-effective solutions.

HOW

- Update your inventories.
- Create or update relevant diagrams.
- Perform and document device checks.
- Identify critical devices and document their condition and support status.

TASKS

- On-Site Device Inventory.
- Communication Diagram Updates.
- Initial On-Site Device Verification.
- Critical Device List and Status.
- Review of Available Documentation.
- Field Survey.
- Gap Analysis and Recommendations.
- Solution and Training Proposal.

DETAILS

The ultimate goal of a site assessment is to identify potential issues before they arise. The process can be summarized in four steps:

- **Discovery:** Gain an in-depth understanding of the current IT/OT environment, existing issues that need to be addressed, and the company's objectives.
- **Analysis**: Assess existing issues and determine the complexity of the required solutions and investments.
- **Definition and Development**: Develop a final vision for the infrastructure that aligns with the company's requirements and objectives.
- **Documentation**: Produce a report that includes the following sections: Executive Summary; IT/OT Assessment (data collected on hardware, software, and processes, best practices, gap analysis, strengths and weaknesses); and Recommendations.



BENEFITS OF A SITE ASSESSMENT

The best way to identify common issues before they arise

An independent assessment gives you a clearer view of your infrastructure and investment priorities. We will help you gain a more comprehensive view of your operations, enabling you to identify your operational strengths and vulnerabilities, prepare your future improvement plan, align your budgets, and create an up-to-date infrastructure inventory.

- **An Essential Step in Any IT, Automation and Control Project.** A site assessment provides you with a precise and in-depth analysis of your environment. Whether conducted before a routine upgrade or a complete infrastructure overhaul, it allows you to identify the strengths of your environment, as well as areas that could benefit from improvement.

- **A New, External, and Objective Perspective.** The true value of a site assessment lies in the insights derived from analyzing the data collected, not in the data itself. As a company specializing in IT/OT services, with more than 20 years of experience in the field, we are able to provide comprehensive, relevant, and objective analyses. In addition, we operate independently of our suppliers, allowing us to provide the objectivity you are looking for.

- **Identify Vulnerabilities.** Vulnerabilities are weaknesses that may expose systems to operational or cybersecurity risks. The more vulnerabilities a system has, the greater the risk.

- **Support Long-Term Planning.** During a site assessment, we always take your business or strategic plan into account. This enables us to provide guidelines that facilitate the implementation of a flexible infrastructure capable of meeting all your current and future needs.

- **Effectively Assess Risks.** Identifying vulnerabilities requires a thorough investigation, as warning signs often go unnoticed until all the conditions for a failure are present. Effective risk assessment requires a detailed and rigorous investigation that highlights the devices at the core of key mitigation measures.

- **Obtain Recommendations to Mitigate Risks.** The analysis resulting from a site assessment includes recommendations that, when implemented, can address specific issues that could disrupt the operation of your infrastructure. These recommendations therefore help reduce the risk of unexpected downtime.

DISASTER RECOVERY PLAN



Develop a plan to quickly restore your infrastructure and ensure business continuity in the event of a major incident.

HOW

- Assess the risks and criticality level of your equipment.
- Establish a list of essential spare parts.
- Identify the software and licenses required for business recovery.
- Develop start-up and restart procedures for your facilities.
- Provide recommendations to strengthen the resilience of your infrastructure.
- Provide remote assistance following a disaster or major event.
- Back up critical databases, configurations, and settings.

TASKS

- Assessment of Equipment Criticality Levels.
- Development of a Spare Parts List.
- Development of a Critical Software List.
- Preparation of Start-Up and Restart Procedures.
- Recommendations to Improve Operational Continuity.
- Remote Assistance Following a Major Event.

DETAILS

A Disaster Recovery Plan (DRP) is an essential component of a Business Continuity Plan (BCP). It is designed to reduce the risk of data loss and support the recovery of IT/OT systems following an incident or disaster.

Our approach to implementing a DRP is structured around four key steps:

- **Strategy Definition**: Analyze risks, recovery objectives, and business requirements.
- **Planning**: Develop recovery procedures, resources, and recovery scenarios.
- **Deployment of Appropriate Technologies**: Implement backup, redundancy, and recovery solutions.
- **Continuous Monitoring and Testing**: Regularly validate the plan to ensure its effectiveness and proper operation in the event of an incident.



BENEFITS OF A DISASTER RECOVERY PLAN

In the event of a disaster affecting your systems, would you be able to resume operations as quickly as possible?

Disasters can be caused by natural, technological, or human factors and can jeopardize business continuity. Even if certain events may seem unlikely, it is essential to anticipate these risks to ensure the rapid resumption of your operations following a major disruption.

- **Ensure the Continuity of Your Critical Operations.** The DRP primarily focuses on protecting your critical processes. For each process, a Recovery Time Objective (RTO) is defined based on your operational requirements and the acceptable downtime. Recovery time objectives are set according to operational needs and validated against the capabilities of the recovery solution.

- **Protect Your Critical Data.** Beyond processes, the DRP also protects the data essential to your operations. Critical data sources and storage systems are identified, and a Recovery Point Objective (RPO) is established based on the criticality of the information. This approach helps minimize data loss and ensures business operations can resume with minimal impact.

- **Significantly Reduce Recovery Times** In the event of a disaster, every minute counts. A Disaster Recovery Plan (DRP) enables you to quickly restore your operations through clearly defined Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs). By identifying critical processes, restoration procedures, and essential backups, you can minimize disruptions and ensure a rapid recovery of your operations.

- **Compliance with Industry Standards.** Renewable energy infrastructure is subject to increasingly stringent regulatory and cybersecurity requirements. A DRP designed according to industry best practices helps you meet applicable standards, such as NERC CIP, while reducing the risks of non-compliance, penalties, and operational disruptions.

- **Reduce Operational and Legal Risks.** A prolonged outage can result in financial losses, legal disputes, and damage to customer trust. By anticipating potential crisis scenarios and planning for business continuity, a DRP strengthens your organization's resilience and provides long-term protection for your business.

- **Optimize Your Infrastructure.** Developing a DRP also provides an opportunity to assess your IT, automation, and control systems as a whole. This analysis helps identify weaknesses, modernize your architecture, and improve the reliability of your infrastructure.

- **Reduce Financial Losses.** Production downtime, data loss, and emergency interventions can come at a significant cost. With an effective recovery strategy, a DRP reduces downtime, protects critical assets, and limits financial impacts. This allows you to safeguard your production while improving the profitability of your operations.

POWER PLANT CONTROLLER (PPC)



Intelligent control for reliable solar plant performance and support for compliance with applicable grid requirements.

HOW

The PPC acts as the central nervous system of your solar power plant. It:

- Collects data.
- Analyzes signals in real time.
- Automatically adjusts the power fed into the grid.

TASKS

- Adjusts production according to grid-imposed limits or contractual requirements.
- Maintains the required power factor and supports grid voltage stability.
- Limits sudden production fluctuations during ramp-up and ramp-down.
- Participates in grid frequency regulation by modulating power output.
- Reduces power output at the grid's request or in response to system constraints.
- Records all operational data for analysis and compliance purposes.

DETAILS

Our PPC solution for solar power plants is built on a proven architecture:

- **Hardware Redundancy**: Duplicated servers and network connections to ensure maximum availability.
- **Fast Response Time**: For optimal responsiveness to grid fluctuations.
- **Broad Compatibility**: Integration with leading inverter manufacturers.
- **Operator Interface**: Intuitive dashboards for real-time monitoring and parameter configuration.
- **Integrated Cybersecurity**: Compliance with applicable standards, encrypted communications, and access management.
- **Remote Updates**: Secure deployment of patches and new features without prolonged service interruptions.



PPC BENEFITS

In an ever-evolving energy landscape, solar power plant operators must meet increasingly demanding requirements, including regulatory compliance, revenue optimization, grid stability, and equipment protection. The Power Plant Controller (PPC) addresses these challenges through centralized, intelligent, and reliable control.

- **Grid Code Compliance**
  Grid operators are imposing increasingly stringent technical requirements for connecting power generation facilities. These grid codes define active power, reactive power, frequency response, and power quality parameters that each facility must meet. The PPC continuously monitors these parameters and automatically adjusts your plant's behavior to support compliance with applicable grid requirements.

- **Revenue Maximization.** The PPC optimizes power injection based on grid constraints, operating conditions, and contractual requirements. It makes the best use of available capacity while minimizing the impact of curtailment, helping improve the profitability of your facility.

- **Equipment Protection**
  When sudden power fluctuations occur, your PPC applies controlled ramp-up and ramp-down rates to limit mechanical and thermal stress on your equipment. By smoothing transitions, it reduces the risk of premature failures, lowers maintenance costs, and extends the lifespan of your power plant.

- **Grid Stability**
  Through precise reactive power control and frequency response, your solar facility actively contributes to maintaining grid voltage and frequency. The PPC positions your site as a responsible and essential player in the energy transition.

- **Complete Operational Visibility**
  The PPC continuously records all of your power plant's operational data. This information supports detailed reports that simplify compliance audits, performance analysis, and the identification of improvement opportunities. You benefit from complete traceability.

- **Designed for High Availability**
  A control system failure can result in significant production losses and contractual penalties. Our PPC solution relies on a redundant architecture designed to ensure maximum availability. Combined with 24/7 monitoring from our control center, this architecture ensures service continuity even in the event of a component failure.

- **Simplified Integration and Expert Support**
  Our team supports you from design through commissioning, including the configuration of parameters specific to your facility. We then provide maintenance, software updates, and technical support. You benefit from a single point of contact specializing in renewable energy for all your power plant control needs.

SCADA



The SCADA system is the backbone of a renewable energy asset. From the design phase onward, its architecture, data model, and control logic must be rigorously defined to ensure safe operations, reliable communications, and long-term scalability.

COMMON CHALLENGES

- **Multi-Vendor Integration**

  Integrate equipment from multiple vendors (turbines, inverters, BESS, substations, weather stations) into a unified platform.

- **IT/OT Network Design**

  Coordinate IT/OT network design and cybersecurity requirements from the outset of the project.

- **Data Model Alignment**

  Ensure that the data model meets contractual, regulatory, and operational requirements.

- **Test Coordination**

  Manage FAT, SAT, and commissioning activities in parallel with construction activities.

- **Grid Compliance**

  Meet grid compliance and interoperability requirements set by ISOs, utilities, and asset owners.

- **Documentation Standards**

  Ensure that documentation, naming conventions, and testing procedures are consistent across all packages.

GANEX APPROACH

We work directly with general contractors, owners, and vendors to design a robust and scalable SCADA system.

- **SCADA Architecture Design**: Network, servers, HMIs, historian, and failover strategies.
- **Control Philosophy and Logic Development**: Defining and developing control strategies and logic.
- **Subsystem Integration**: Integrating all site subsystems into a secure and reliable platform.
- **Cybersecurity Planning**: Aligning cybersecurity with best practices and evolving standards.
- **Factory and Site Acceptance Testing**: Conducting FAT and SAT with clear procedures and comprehensive evidence tracking.
- **Commissioning Support**: Ensuring every device communicates and operates as intended.
- **Operations and Maintenance Documentation**: Providing manuals and documentation to support operations, maintenance, and regulatory audits.



DETAILS

In solar, wind, or hybrid power plants, SCADA provides:

- **Real-Time Monitoring**: Instant visibility into production, equipment status, alarms, and performance indicators.
- **Data Acquisition and Historian**: Continuous collection of electrical, weather, and operational data, with secure archiving for analysis and audits.
- **Centralized Equipment Control**: Control of inverters, trackers, substations, batteries, meters, and other equipment through a single interface.
- **Alarm and Event Management**: Rapid anomaly detection, automated notifications, and detailed incident tracking to reduce downtime.
- **Multi-Vendor Integration**: Communication with equipment from different manufacturers using industry-standard protocols.
- **Cybersecurity and Availability**: A secure architecture with access management, server redundancy, and data backups to ensure operational continuity.

BENEFITS OF A MODERN SCADA SYSTEM

- **Complete Site Visibility.** Access all your facility data from a single interface: production, equipment status, alarms, and key performance indicators. Make faster, more informed decisions.
- **Reduced Downtime.** With intelligent alarms and remote diagnostics, anomalies are detected quickly. Interventions are more efficient, reducing downtime and improving availability.
- **Simplified Equipment Management.** Control integrated equipment from a single platform, even when it comes from different manufacturers. Save time and simplify day-to-day operations.
- **Simplified Regulatory Compliance.** Data is recorded and stored in a historian to meet the requirements of data analysts, grid operators and regulatory authorities. Audits and reporting are streamlined.
- **Enhanced Security.** The system protects your data and infrastructure through cybersecurity mechanisms, access controls, and server redundancy.
- **Long-Term Scalability.** The SCADA system adapts to the evolution of your facility. New equipment and functionalities can be added easily without compromising the existing architecture.
- **Remote Operations.** Monitor and control your power plant from anywhere through a secure web interface. Maintain control of your operations at all times.



WHAT ABOUT SCADA RETROFIT?

SCADA retrofit aims to modernize the supervision, control, and communication infrastructure of an existing asset by upgrading all or part of the SCADA system to improve performance, cybersecurity, reliability, and integration with modern systems.

SCADA retrofit may include:

- Replacing outdated legacy SCADA software
- Migrating aging operator interfaces
- Connecting legacy PLCs to a new supervisory system
- Adding communication gateways
- Modernizing control stations, servers, industrial networks, and data historians
- Integrating with MES, ERP, cloud platforms, or analytics tools

- **Cost Reduction.** SCADA retrofit allows you to modernize a facility without replacing all of its equipment. Your organization can retain functional components and replace only obsolete parts, reducing the overall project cost.

- **Less Production Downtime.** Modernization can often be carried out in stages, without shutting down the entire facility for an extended period. This limits production losses and makes the transition easier to manage.

- **Extended Equipment Lifespan.** SCADA retrofit allows you to continue using equipment that is still performing well while modernizing the supervisory system. This improves equipment utilization and extends the lifespan of the facility.

- **Progressive Modernization.** SCADA retrofit enables a phased approach rather than requiring a complete transformation of the system all at once. This makes the project easier to manage from a technical, financial, and organizational perspective. It also allows you to prioritize the most critical areas before extending modernization to the rest of the facility.

- **Improved Performance and Visibility.** A modernized SCADA system provides clearer interfaces, improved alarm management, and easier access to historical data and key performance indicators. Operators can monitor the facility more effectively and respond more quickly when issues arise.

- **Enhanced Cybersecurity and Maintenance.** SCADA retrofit enables the integration of newer, more secure, and easier-to-maintain solutions. It reduces risks related to failures, obsolescence, and security vulnerabilities while making troubleshooting easier.



MONITORING

We leverage our experience to support our clients throughout their operational processes.



HOW

We monitor the following equipment and metrics:

- IT: Servers and PCs, virtual machines and hypervisors, network equipment (switches, routers, access points), NAS and SAN systems, cloud and web services, operating systems and software, services, and databases.
- OT and Telecommunications: OT equipment (RTUs, PLCs, data loggers).

TASKS

- **Continuous Monitoring**: Ongoing monitoring of equipment capacity, performance, health, and availability through dashboards.
- **Recurring Health Checks**: Regular health checks with customized monthly reporting.
- **Event and Threshold Monitoring**: Monitoring of events, dynamic thresholds, and trend detection.
- **Early Failure Detection**: Improved detection of early failures, equipment degradation, and end-of-life conditions.
- **Ganex Team Support**: Support from the Ganex team in analyzing results to guide decision-making.

DETAILS

Our remote monitoring solution provides continuous visibility into your critical equipment through a secure approach, available in either cloud-based or on-premises environments.

- **Continuous Monitoring**: Track changes in equipment capacity, performance, health, and availability through dashboards, with monthly reports on system health and trends.
- **Recurring Health Checks**: Short, customized monthly reports provide a continuous and up-to-date overview of your systems.
- **Expert Recommendations**: Our team supports you in analyzing the results to help you make the best decisions.
- Our goal is to ensure that your data remains accessible, reliable, and secure at all times, while saving your internal teams time and reducing their workload.



MONITORING BENEFITS

Your Remote Sites, Always Under Control: Solar farms in remote rural areas, wind turbines in isolated regions.

Your Critical Systems Never Sleep. Neither Do We. SCADA, RTUs, and PLCs: in collaboration with our control center, we monitor the core of your operations 24/7 to help keep your production running without interruption.

Extend the Life of Your Assets, Protect Your Investments. Anticipate equipment aging, plan replacements, and get the most out of every asset.

Keep Cyber Threats at a Distance. Energy infrastructure is a target. Our proactive monitoring helps detect and mitigate threats before they impact your operations.

- **Improve the Performance of Your IT and OT Infrastructure.** A monitored infrastructure is a high-performing infrastructure. By continuously measuring key equipment performance indicators, our solution detects bottlenecks and optimizes your systems before performance deteriorates.

- **Identify Issues and Find Solutions Quickly.** Numerous failures are preceded by warning signs. Our solution detects early warning signs before they turn into outages, enabling your teams to respond quickly and accurately while minimizing recovery times.

- **Proactively Support Your End Users' Activities.** Say goodbye to unplanned interruptions that impact productivity. By anticipating failures rather than reacting to them, you provide your teams with a stable and reliable environment at all times.

- **Reduce Maintenance Costs and Improve Predictability.** A problem detected early can be less costly to fix than an emergency failure. Through continuous equipment monitoring, you can schedule interventions at the right time and turn maintenance into a true cost-saving opportunity.

- **Provide Reliable Data to Guide Your IT Team's Work.** No more decisions made in the dark. Our clear, up-to-date reports give your IT team a solid foundation to prioritize actions, optimize resources, and demonstrate the value of their interventions.

CYBERSECURITY AND NETWORK INFRASTRUCTURE



Cybersecurity has become one of the biggest challenges facing the industry. Hacking activities, supply chain attacks, and ransomware are becoming increasingly common in the renewable energy sector.

HOW

- Conducting vulnerability assessments.
- Reviewing firewall rules and tracking firmware updates.
- Providing support for NERC CIP assessments and operational compliance audits.
- Monitoring logs to detect suspicious activity.
- Conducting phishing simulations and penetration testing.
- Training employees on cybersecurity best practices.

TASKS

- Vulnerability Assessments.
- Log Monitoring to Detect Suspicious Activity.
- User Account and Remote Access Management.
- Firewall Rule Reviews.
- Security Patch Management.
- Phishing Simulations.
- Cybersecurity Training.
- Subscription Renewal Monitoring.
- License Renewal Management.

DETAILS

Our cybersecurity hardening services focus on implementing best practices to prevent cyber incidents and enable rapid business recovery in the event of a breach.

We analyze the security rules and configurations of your equipment, event logs, firmware versions, and all vulnerabilities identified across your network. The results are presented in a detailed report that includes an executive summary and clear recommendations to strengthen your cybersecurity posture.

We assess the agreed scope against applicable NERC CIP requirements, identify gaps, and recommend corrective actions.

It is widely recognized that employees are a primary entry point for cyberattacks, particularly through phishing and social engineering. Studies show that many security incidents are attributable to human error. We raise awareness and train your employees on cybersecurity best practices so they can recognize threats and adopt the right behaviors to help prevent them.



BENEFITS OF CYBERSECURITY AND NETWORK INFRASTRUCTURE

Cybersecurity is constantly evolving. Rely on specialists to support you.

Statistics and reports from around the world show that cybersecurity threats are pervasive and continue to grow, both in number and in complexity. Studies also reveal that most companies have inadequately protected data and do not implement proper cybersecurity practices.

It is essential to develop a strong cybersecurity culture within your organization by raising awareness among your teams and integrating best practices for prevention and protection into your daily operations. This approach helps reduce risks, strengthen your organization's resilience, and better protect your digital assets.

- **Improve Visibility and Establish a Baseline.** Our team helps you build an accurate picture of your current cybersecurity posture and identify areas for improvement to strengthen your level of protection.
- **Address Security Vulnerabilities.** Vulnerabilities are not attacks themselves, but weaknesses that can be exploited by malicious actors to gain access to your network, increasing the risk of intrusion. Identifying and addressing these weaknesses can significantly reduce your attack surface.
- **Reduce Data Breaches and Their Impact.** Infrastructure that is continuously monitored is more resilient to cyberattacks. It experiences fewer security incidents, limits data loss, and enables faster recovery. The costs associated with a data breach can be extremely high, and some consequences may be irreversible.
- **Respond More Quickly to Cyberattacks.** When an incident occurs, speed of response is critical. Having an incident response plan covering different scenarios helps limit the impact, accelerate operational recovery, and reduce risks to your organization.
- **Support Compliance with Standards and Regulations.** In most industries, organizations must comply with various cybersecurity standards and regulatory requirements, often involving audits and reporting. Our cybersecurity and network infrastructure services provide the tools and support needed to meet the requirements of certification bodies and regulatory authorities.
- **Strengthen Remote Work Security.** Remote access to company resources increases security risks when it is not properly controlled. An effective identity and access management strategy, combined with continuous activity monitoring, can significantly reduce these risks while providing employees with secure access to company systems.

CONTROL CENTER

Once your site is up and running, its performance depends on how quickly incidents are resolved and on the quality of operational monitoring. Our control center provides continuous oversight.



HOW

Our operators continuously monitor your solar, wind, and energy storage assets using the SCADA systems already in place at the client's site, through a secure remote connection.

TASKS

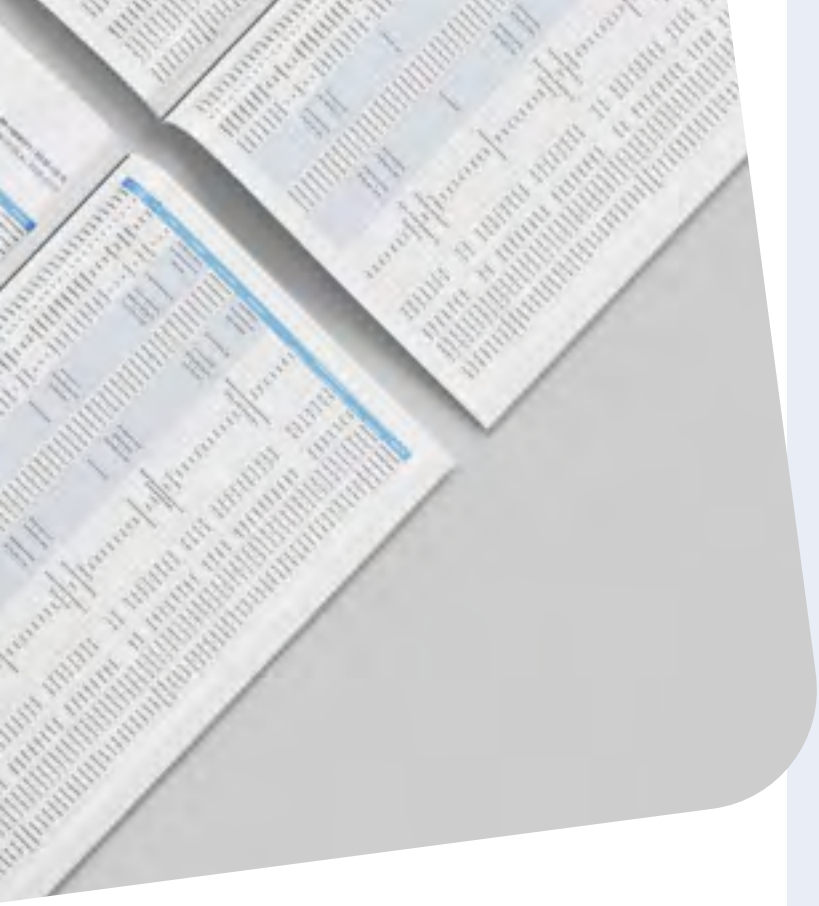
- **Lockout/Tagout and Overrides**: Support authorized switching and equipment shutdowns in accordance with approved site procedures.
- **Fault Response**: Resetting or executing specific commands in response to a detected anomaly.
- **Instant Notifications**: Email, SMS, or phone call alerts as soon as a critical event occurs.
- **Power Curtailment**: Starting and stopping operations based on grid or client requests.
- **Remote Commands**: Sending specific commands in accordance with client procedures.
- **Camera Monitoring**: Monitoring cameras following an event or to track site activities.
- **Weather Monitoring**: Wind and storm alerts, with notifications as critical events approach.
- **Security Support**: 24/7 availability for event management and security-related requests.

DETAILS

Our control center is built on a secure, redundant infrastructure:

- Redundant Secure Control Room: Computers, internal network connections, and backup power systems to ensure maximum availability.
- Standardized Operational Software: Tools that guide operators and automatically format reports.
- Integrated Client Procedures: Action lists for each type of fault, as well as procedures for handling specific requests.
- IT/OT Cybersecurity: Architecture aligned with industrial cybersecurity best practices.

All our reports include events related to the site, weather conditions, wind turbines, cameras, and operations. This includes daily, weekly, and monthly reports, as well as special reports upon request and outage notifications—all provided in a standardized format with exportable data.



BENEFITS

- **Immediate response, day and night.** Fault detected, action taken. Our operators respond in real time, 24/7, reducing costly delays between incident detection and resolution.
- **Maximize your production, minimize your losses.** Every hour of unaddressed downtime means lost energy and revenue. Our continuous monitoring significantly reduces downtime and directly protects your profitability.
- **Outsource without losing control.** Entrust monitoring to our experts while maintaining full visibility into your operations. Reduce your internal costs without compromising the quality of operational oversight.
- **Reduce blind spots across your sites.** Solar, wind, energy storage, weather, cameras: everything is monitored from a single control center. One unified view, even across diverse fleets operating on multiple SCADA platforms.
- **Better support for your field technicians.** Our operators coordinate with and guide your teams during critical interventions, reducing errors, accelerating diagnostics, and improving on-site safety.
- **Anticipate severe weather before it strikes.** Storms, extreme winds, critical weather conditions: our proactive weather monitoring provides early alerts to help protect your equipment and adapt your operations in real time.
- **Compliance made easy.** Standardized reports, complete event traceability, and exportable historical data provide all the documentation you need to meet stakeholder expectations and regulatory requirements.
- **An infrastructure designed for uninterrupted operation.** Full redundancy, industrial cybersecurity, and proven procedures: our control center is designed to operate continuously, even in the event of a partial system failure.
- **Scale up without hiring.** Whether your fleet is expanding or your needs are evolving, our control center adapts seamlessly. No hiring, no training, no painful transition.
- **Field-proven expertise since 2015.** Hundreds of turbines monitored, multiple SCADA platforms mastered, and thousands of incidents handled: our team brings operational expertise that can only be built through years of hands-on experience.



CONSULTING EXPERTISE

We leverage our experience to support our clients throughout their operational processes.

HOW

- We help you solve complex problems with realistic, cost-effective solutions.
- We provide exceptional assistance and support services.
- We implement reliable systems to optimize your production and maximize availability.
- We design resilient systems to support operational continuity.
- We integrate automation solutions designed to streamline operations and increase productivity.

TASKS

- High-Availability Infrastructure Design.
- IT – Automation and Control Software Analysis.
- System Maintenance and Optimization.
- Data and Database Management.
- Technology Audits and Assessments.
- Regulatory Compliance and Standards.

DETAILS

In addition to our professional IT, Automation, and Control support services, we offer flexible and customized consulting services specifically designed for industrial facilities in renewable energy, water and wastewater treatment, and manufacturing.

Our consulting services cover specialized areas such as IT, Automation and Control, cybersecurity, system optimization, and much more.

Whether you need guidance on your technical or strategic environment, we are your trusted IT, Automation, and Control partner. Our commitment is to support and guide you every step of the way toward achieving your goals and long-term success.



BENEFITS OF CONSULTING SERVICES

High-Availability Solutions for Profitable Operations

Our extensive experience of more than 20 years in the industry gives us a competitive edge when facing complex environments where process continuity is critical. We set high service-level objectives, and our 99.999% availability target speaks volumes about our commitment to our clients.

AVAILABILITY %	NINES	DOWNTIME PER YEAR
99%	2	4 days
99.9%	3	9 hours
99.99%	4	53 minutes
99.999%	5	5 minutes

According to data collected from Gartner and IDC, downtime costs for small businesses range from $137 to $427 per minute, and can reach as much as $5,600 per minute for medium-sized and large enterprises. It is worth noting that when downtime is caused by a security breach, the costs can increase dramatically.

- **High-Availability Systems Specialists.** Our team of IT/OT experts develops solutions based on industry best practices and proven, time-tested strategies.

- **Cost-Effective Solutions.** Your success matters to us. That is why we are committed to finding innovative, cost-effective solutions that maximize asset performance while minimizing downtime. With many years of experience in the renewable energy sector, our experts are well equipped to assess your needs and provide valuable guidance on the industrial IT, automation, and cybersecurity services best suited to your business.

- **Integrated IT and Automation & Control.** Our multidisciplinary team manages both IT and Automation & Control, providing benefits such as cost reductions through the use of shared platforms and resources, minimized risks, and improved decision-making.

- **Economies of Scale and Purchasing Power.** Focused on IT and Automation & Control, we achieve economies of scale and operate more efficiently. With consolidated purchasing power and access to an extensive knowledge base, we perform our work efficiently, saving you time and money.

- **Access to Resources on Demand.** Businesses need resource flexibility to successfully deliver projects, support day-to-day operations, and respond quickly when issues arise.

By relying on our IT/OT professionals, you gain this essential flexibility without the burden of managing additional employees.

DATA HISTORIAN MAINTENANCE



Monitor the critical indicators of your operational database and gain clear insight into its health and performance.

HOW

- Data availability validation.
- Stale data verification.
- Archive status verification.
- Test report execution.
- Software version verification and updates.
- Verification of collector nodes and other remote devices.

Task Frequency

TASKS	FREQUENCY
Validate Data Availability	Monthly
Check for Stale Data	Monthly
Check Archive Status	Monthly
Run a Test Report	Quarterly
Check Software Version	Twice Monthly
Update Software Version	Quarterly
Check the Data Collector (if applicable)	Monthly
Check Physical Equipment and/or Backup Storage System	Monthly
Archival backup and clean up of the database	Annually

DETAILS

Through secure remote access via a site-to-site VPN connection, we collect information from your local or centralized database (such as the AVEVA™ PI System™ or Canary) to monitor the health of your infrastructure.

We pay particular attention to the server components that support the operation of your database, including storage and network equipment. Keeping your database in good working condition helps protect your historical data and enables the detection of issues that may affect data quality, such as stale or corrupted data.

We also perform preventive maintenance activities to minimize the risk of data loss, including full backups, database cleanup, and software version updates.



BENEFITS OF DATA HISTORIAN MAINTENANCE

Collect essential operational metrics to optimize and improve your database performance.

Your industrial IT, automation, and control applications rely on high-performing databases to ensure smooth operations. Even the slightest slowdown can compromise data availability and impact system performance.

Over time, data growth, infrastructure changes, and evolving usage patterns naturally affect database performance. Regular preventive maintenance helps preserve efficiency, ensure data integrity, optimize performance, and reduce the risk of operational disruptions.

- **Ensure Operational Continuity.** Many production processes rely on a data historian to operate properly or record data. A database issue can quickly affect multiple critical systems and disrupt your operations.
- **Manage the Natural Growth of Your Database.** As data volumes grow, capacity and configuration should be reviewed to maintain performance. Regular maintenance helps sustain performance and long-term data integrity.
- **Identify the Root Causes of Performance Issues.** A single failed process can affect the performance of the entire platform. Regular maintenance makes it easier to identify recurring root causes by leveraging intervention history and data collected over time.
- **Use Trend Analysis to Plan Capacity and Upgrades.** Data collected during maintenance activities makes it possible to track the evolution of key parameters, such as database growth and response times. These trends help plan future resource requirements and infrastructure upgrades.
- **Establish a Performance Baseline to Monitor Operations.** By building a historical record of system performance, you can establish normal operating thresholds and quickly detect anomalies that require intervention.

ON-SITE MAINTENANCE



Prevent and address hardware failures while keeping your infrastructure inventory up to date.

HOW

- We perform physical maintenance and clean equipment.
- We validate the integrity of fiber optic loops.
- We inspect and secure electrical and network connections.
- We review and update inventory lists and site diagrams.

Annual Preventive Maintenance

TASKS

- Visual inspection of equipment.
- Dust removal and cleaning.
- Inspection of connections (fiber optic, Ethernet, and terminal blocks).
- Tightening of terminal blocks.
- Inventory and site diagram updates.
- Inspection of equipment for signs of overheating.
- Inspection of junction boxes and panels for signs of water ingress or leaks.
- Preparation of a maintenance report and checklist.

DETAILS

Most industrial IT, automation, and control maintenance activities can be performed remotely, but some interventions require an on-site presence. Although often overlooked, these preventive maintenance activities make a significant contribution to the reliability and availability of your facilities.

Remote sites particularly benefit from planned interventions that consolidate all routine maintenance activities into a single visit. This approach helps reduce mobilization and labor costs while allowing our specialists to perform corrective work that cannot be completed remotely.

Unexpected equipment replacement can result in significant costs, especially when critical systems are involved. In emergency situations, weather conditions, supply lead times, or parts availability can considerably extend the time required to restore normal operations.



BENEFITS OF ON-SITE MAINTENANCE

Hardware-related failures occur far more frequently than one might generally expect.

Hardware failures can cause significant operational disruption. Planned inspections help identify deterioration and environmental risks. Recent analyses of the causes of IT system outages consistently show that infrastructure and network issues rank among the leading causes of downtime.

- **Keep Hardware in Optimal Operating Condition.** When seeking to improve performance and extend equipment lifespan, the physical components of the infrastructure are often overlooked. Maintenance activities focus in particular on cooling efficiency, power management, and external signs of deterioration.

- **Prevent System Failures Caused by Hardware Issues.** Most conditions that can affect hardware performance and lifespan are related to the operating environment. Temperature, humidity, vibration, power quality, and dust are among the main factors contributing to the deterioration of electronic equipment. Regular on-site inspections help identify these issues and implement corrective actions.

- **Avoid Delays and Errors Caused by Outdated Information.** The software and hardware components of your system evolve throughout their lifecycle. Both preventive and corrective maintenance activities rely on infrastructure diagrams and component inventories. Outdated information can significantly slow down technicians' work and troubleshooting operations.

- **Reduce Maintenance Costs.** Preventive on-site maintenance helps reduce the overall cost of maintaining your systems. It shortens intervention times, extends equipment lifespan, and minimizes losses associated with production downtime.

ASSET SUPPORT & SERVICES (IT/OT)



Keep your assets performing, from resolving today's issues to planning what comes next.

HOW

We provide remote or on-site support according to the issue at hand. Our specialists work with your operators, technicians, and managers to troubleshoot problems, deliver targeted improvements, and plan future investments.

TASKS

- Respond to service calls involving automation, IT/OT systems, and networks.
- Diagnose and resolve technical issues remotely or on site.
- Upgrade systems and integrate new equipment or capabilities.
- Assess SCADA, network, and cybersecurity environments.
- Analyze real-time and historical data to improve data quality and system performance.
- Advise teams on new ideas and small to midsize projects.
- Help set priorities and plan budgets for multi-year upgrades.

DETAILS

Operating assets create a wide range of service needs. Some call for a quick response; others require a closer assessment before the right solution becomes clear. A communication issue, a new integration, or an aging control system can each affect availability and day-to-day operations.

Our team adjusts its support to the situation. We can troubleshoot a specific issue, carry out a technical assessment, or deliver an improvement project. Findings from the site and its data help distinguish immediate actions from investments that should be planned over time.

This gives operations teams technical support for today's challenges and a stronger basis for future decisions.



BENEFITS OF ASSET SUPPORT

Resolve issues faster.
Access to specialized technicians and engineers helps teams diagnose automation, network, and IT/OT incidents. They can identify the cause of a problem and move toward a solution with expert support.

Improve reliability and availability.
Targeted upgrades, technical fixes, and system optimization help address recurring issues and keep assets operating effectively.

Gain a clearer view of future risks.
SCADA, network, and cybersecurity assessments help identify aging components, improvement opportunities, and issues that could affect operations.

Plan investments more effectively.
By connecting technical needs with operational priorities, you can build a practical upgrade strategy and schedule projects over several years.

Get more value from your data.
Real-time and historical analysis helps uncover data quality issues, understand performance trends, and guide improvements.

Turn ideas into actionable projects.
Whether you are considering a new integration or a change to an existing system, Ganex can help assess the idea, define the solution, and put it into practice.

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