

# ACHIEVING NIS2 COMPLIANCE WITH OTBASE



*How the Leading OT Asset Management System Empowers  
European Asset Owners*

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## Executive Summary

The EU's NIS2 Directive (Directive (EU) 2022/2555) represents a significant escalation in cybersecurity obligations for essential and important entities across critical sectors. Effective since 2024 and fully enforceable across Member States, NIS2 places direct responsibility on management bodies for cybersecurity risk management (Article 20) and mandates a comprehensive set of technical, operational, and organisational measures (Article 21). Central to these requirements is *asset management* – the ability to maintain an accurate, up-to-date inventory of all network and information systems assets, including those in OT environments.

For European asset owners operating in manufacturing, energy, transport, utilities, and other OT-heavy sectors, achieving and proving compliance is particularly challenging. Legacy OT systems, air-gapped networks, proprietary protocols, and the limitations of passive monitoring tools often result in incomplete visibility, making it impossible to perform credible risk assessments, vulnerability management, or audit-ready reporting.

OTbase, the pure-play OT asset management system, directly addresses these challenges. As a software-only, on-premise solution with active discovery, OTbase delivers a contextualized, evergreen OT asset inventory that goes far beyond basic detection. It enables European asset owners to meet – and exceed – NIS2 Article 21 requirements for asset management, risk analysis, vulnerability handling, supply chain oversight, and governance accountability. This whitepaper details how OTbase transforms regulatory compliance from a burden into a strategic advantage, delivering operational resilience, reduced risk, and audit-ready evidence.

## 1. Understanding NIS2: Why OT Asset Management Is Non-Negotiable

NIS2 expands the scope of the original NIS Directive, covering a broader range of sectors and imposing stricter obligations. Key provisions relevant to OT asset owners include:

- Article 20 – Management Body Accountability: Senior leadership is personally responsible for approving and overseeing cybersecurity risk-management measures. Non-compliance can result in significant fines (up to €10 million or 2% of global annual turnover) and personal liability.
- Article 21 – Cybersecurity Risk-Management Measures: Entities must implement “appropriate and proportionate” measures based on an all-hazards approach. Among the minimum requirements listed in Article 21(2) are:
  - (a) policies on risk analysis and information system security;
  - (e) vulnerability handling and disclosure;
  - (i) *asset management* (explicitly required).

Supporting Guidance (e.g., ENISA and national implementations): Asset management (RMM007 in some national frameworks) demands a complete, regularly updated inventory of hardware, software, networks, and third-party assets; classification by business criticality and dependencies; and traceable handling throughout the asset lifecycle.

Passive or hybrid tools frequently fall short because they cannot guarantee completeness in complex, protocol-diverse OT environments. NIS2 demands *evidence-based* visibility – not assumptions or partial coverage. Without it, risk assessments, incident response, supply-chain due diligence, and management reporting become unreliable.

## **2. The OT Compliance Challenge for European Asset Owners**

European industrial operators face unique hurdles:

- OT environments often span multiple sites, countries, and legacy systems using protocols (e.g., SERCOS, ControlNet, Profibus, DH+) that IT-centric tools ignore.
- Air-gapped or highly segmented networks limit passive monitoring effectiveness.
- Manual inventories are outdated the moment they are created.
- Supply-chain risks (third-party devices, machine builders, vendors) must be mapped and managed.
- Auditors and regulators require auditable, contextual data – not raw scan logs.

The result? Many organizations struggle to demonstrate the foundational asset inventory required for NIS2 compliance, exposing them to regulatory, operational, and reputational risk.

## **3. OTbase: The Gold Standard in OT Asset Management**

OTbase is a purpose-built, on-premise OT/ICS asset management system developed by the team behind the Stuxnet analysis. It is deployed by some of the world's largest manufacturing and oil & gas enterprises to manage hundreds of thousands of OT assets globally.

Core Architecture Advantages and Differentiators:

- Software-only, active discovery: No hardware sensors, agents, or forced cloud connectivity. OTbase Discovery actively queries OT networks and protocols down to Level 0, delivering deeper, more accurate results than passive alternatives.

- Daily automated updates: The inventory is evergreen – changes, new devices, and configuration drifts are captured automatically and consolidated in the central OTbase Inventory database.
- Contextualization at scale: Beyond raw technical data (devices, firmware, software, networks), users add or auto-enrich context including geolocation, ISA-95 hierarchy, process dependencies, criticality, custom fields, and floor-plan mapping.
- On-premise security: All data remains within the customer’s environment, supporting EU data sovereignty and reducing breach surface.
- Additional capabilities: Built-in vulnerability matching (CVEs against installed base, no extra scans), root-cause analysis for “repeat offender” products, compliance policy checks, Power BI dashboards, real-time KPIs, and OTbase Insight (on-prem AI for natural-language queries of the inventory).

OTbase is deliberately simple to use while being enterprise-grade – IT auditors, OT engineers, security teams, and management all find the information they need without specialized OT expertise.

## 4. How OTbase Directly Supports NIS2 Compliance

OTbase maps precisely to the core NIS2 obligations:

NIS2 Requirement	OTbase Capability	Compliance Benefit
Asset Management (Art. 21(2)(i) & RMM007)	Automated, daily-updated inventory of devices, networks, software; full protocol support; contextual enrichment (ISA-95, location, dependencies)	Provides the complete, accurate, traceable asset catalogue required as the foundation of all risk management. Evergreen nature eliminates manual effort and audit gaps.
Risk Analysis & Information System Security (Art. 21(2)(a))	Contextual inventory + vulnerability mapping + dependency visualization	Enables credible, asset-based risk assessments. Management receives real-time KPIs and dashboards for oversight.
Vulnerability Handling (Art. 21(2)(e))	Automatic CVE matching against installed base; identification of repeat-offender products; evergreen compliance checks (e.g., outdated OS, prohibited software)	Shifts from reactive patching to root-cause elimination. Generates auditable evidence of proactive vulnerability management.
Supply Chain Security	Detailed product lifecycle, vendor, and firmware data; third-party device visibility	Supports due diligence and risk assessment of suppliers and machine builders.

Incident Handling & Business Continuity	Accurate asset data speeds root-cause analysis, impact assessment, and recovery planning	Reduces mean time to recovery; supports crisis management with reliable system maps.
Management Accountability (Art. 20)	Role-based dashboards, audit-ready reports, and on-prem AI insights	Gives executives clear, evidence-based visibility into OT risk posture without relying on incomplete data or vendor claims.
Overall Governance & Audit Readiness	Automated policy enforcement, change tracking, Power BI reporting	Prepares organizations for regulatory audits and demonstrates “proportionate measures.”

Because OTbase uses active discovery, it delivers the *evidence-based* inventory that regulators and auditors increasingly demand under NIS2 – something passive or hybrid tools cannot reliably provide.

## 5. Beyond Compliance: Operational and Strategic Value

Organizations using OTbase report:

- Dramatically reduced time spent on inventory building and maintenance.
- Faster troubleshooting, system planning, obsolescence management, and cyber FAT/SAT processes.
- Stronger IT/OT convergence and digital transformation initiatives.
- Lower ransomware and cyber-physical risk through proactive hardening.

OTbase turns the NIS2 compliance project into a platform for long-term OT resilience.

## 6. Implementation and Next Steps

OTbase is designed for rapid deployment with minimal disruption. A typical rollout begins with targeted discovery in key networks, followed by contextual enrichment and integration into existing workflows (e.g., ServiceNow, Power BI). Langner provides comprehensive onboarding support, handbooks, and proven methodologies developed over years with global asset owners.

European asset owners in scope of NIS2 are encouraged to evaluate OTbase as part of their compliance roadmap.

## Conclusion

NIS2 is not merely a compliance checkbox – it is a mandate to achieve genuine OT visibility and risk management maturity. OTbase delivers exactly what European asset owners need: a comprehensive, contextualized, evergreen OT asset inventory built on active discovery, running entirely on-premise. By implementing OTbase, organizations not only meet the letter of Article 21 but position themselves for stronger governance, reduced operational risk, and competitive advantage in an increasingly regulated and interconnected industrial landscape.

Ready to move from compliance to resilience? Request a demo or download the OT Asset Inventory Handbook at <https://otbase.com/>.

## About OTbase

Developed by Langner, Inc., OTbase is the gold standard for OT asset inventory and management. Trusted by global enterprises, it delivers the depth, accuracy, and usability that passive and hybrid solutions cannot match.

For more information about OTbase, please check <https://otbase.com>.

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