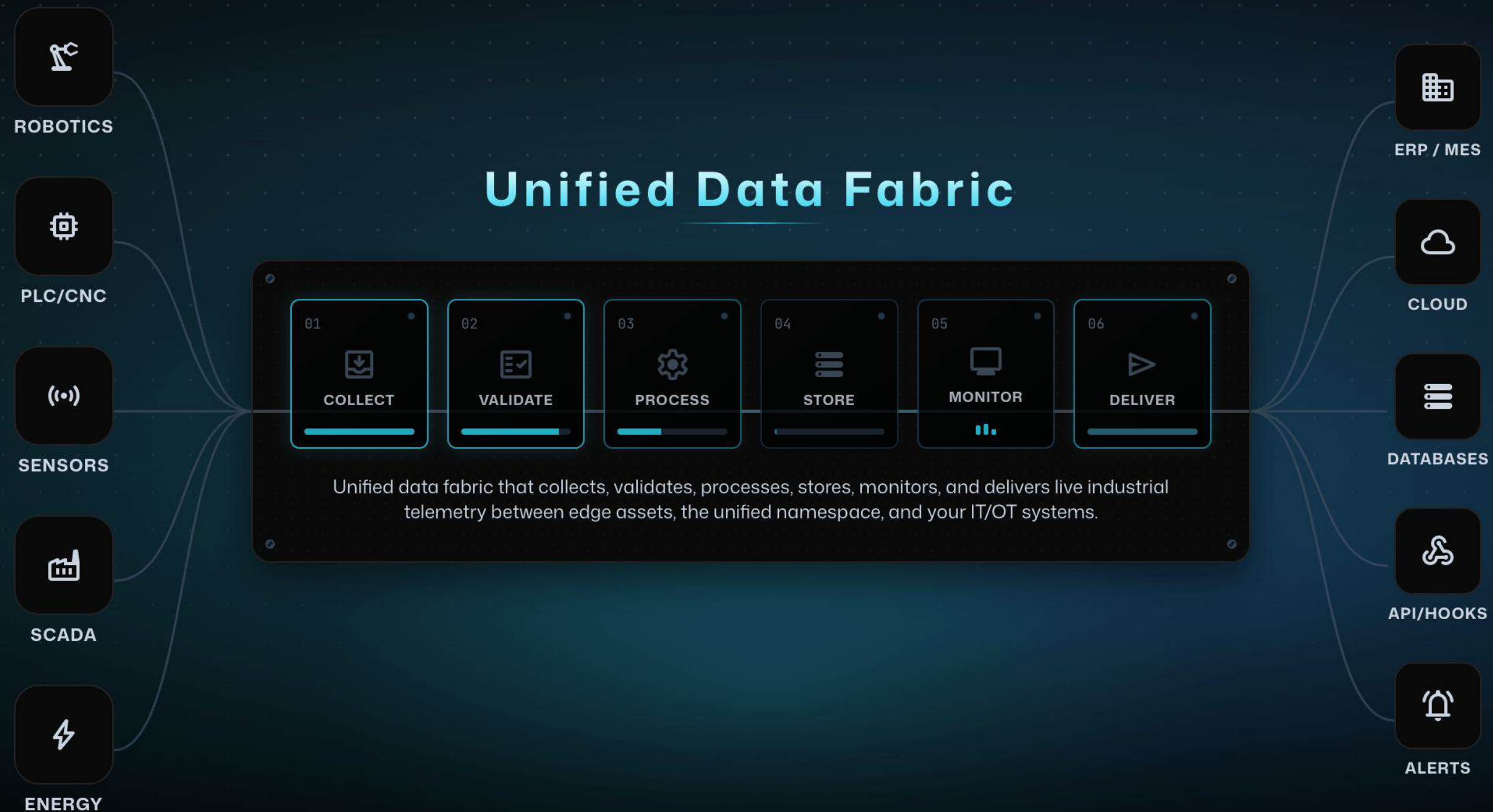


Proxus

From Data to Operations: A Single Platform

 50+ Industrial Protocols  <10ms Edge Latency  100K+ Tags per Gateway   Zero Data Loss



The Importance of Digital Transformation in Industry

Digital transformation in industry is no longer a preference but a necessity to reduce costs, enhance efficiency, and achieve sustainable competitive advantages. This transformation is only possible with proper data flow and involves the following steps:



Device Integration (Data Collection)

Accessing operational data is essential for optimizing business processes.



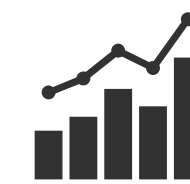
Data Enrichment and Transformation

Raw data must be converted into meaningful information to make informed business decisions.



Pre-Analysis and Rules

To identify problems, data must be analyzed in real-time.



Visualization

Complex data must be presented clearly and understandably for effective management.



Data Storage

Without historical data, trend analysis and reporting are impossible.



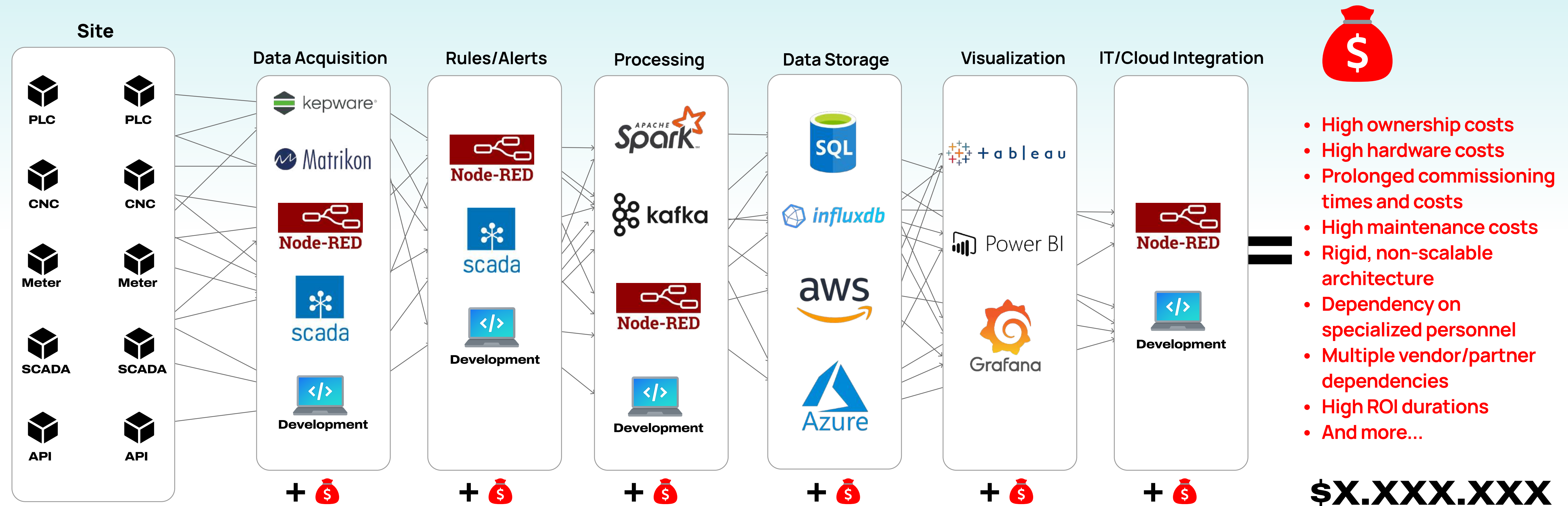
IT Integrations

Processes remain inefficient without harmony between different systems.

To achieve this data flow, companies often need to bring together disconnected and fragmented traditional solutions. 

Challenges of Traditional Solutions

Traditional fragmented systems used in industrial operations consist of different software and infrastructure layers. This structure complicates integration and creates cost and performance issues for businesses:

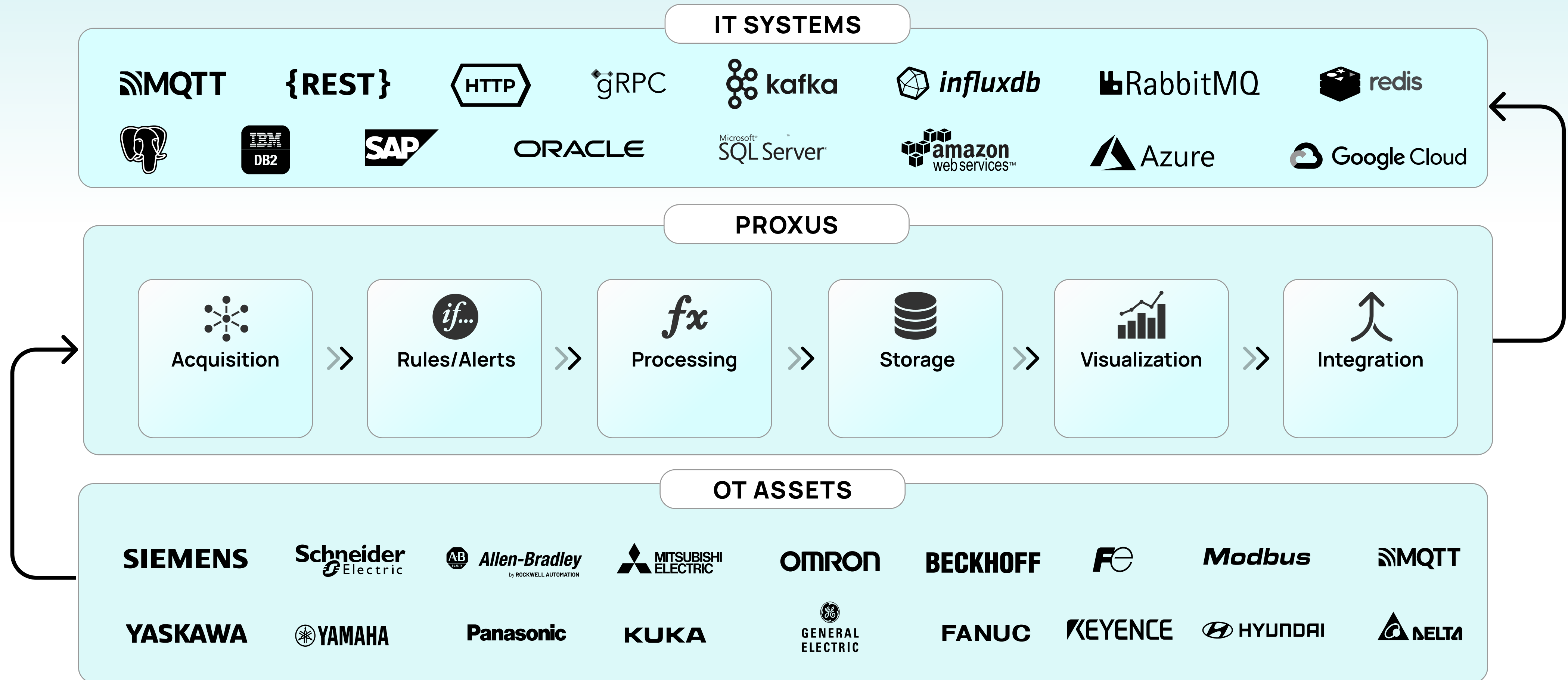


This fragmented and complex structure makes it difficult for businesses to achieve their digital transformation goals.

There is a need for an integrated, scalable, and cost-effective all-in-one platform. 

Meet Proxus

Proxus is a next-generation **IIoT/UNS/SSoT** platform that eliminates complexity by uniting your industrial operations on a single platform. Its distributed edge computing architecture allows data processing at the edge and provides unparalleled scalability.



Get Start in 5 Minutes!

Don't waste time with lengthy setups! Proxus offers a quick and easy setup process to help you start your digital transformation journey immediately.

Easy Installation 🚀

Set up in minutes using Docker.

Quick Configuration ⚙️

Define your devices with a user-friendly interface.

Instant Integration 📡

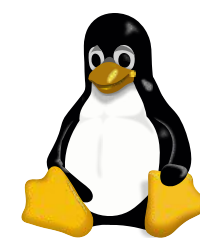
Connect your devices and start collecting data.

Save 95% on Setup Time 🕒

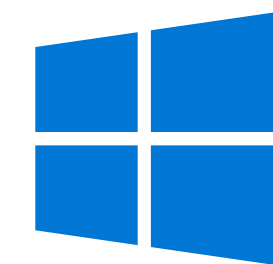
compared to traditional systems.

```
➔ ~ docker-compose -p "proxus" up -d
[+] Running 5/5
 ✓ Container hub-server      Running      0.0s
 ✓ Container proxus-api      Running      0.0s
 ✓ Container timescaledb     Running      0.0s
 ✓ Container proxus-ui       Running      0.0s
 ✓ Container proxus-server   Running      0.0s
➔ ~ █
```

Cross platform



Linux

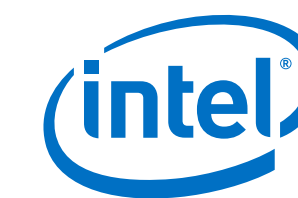


Windows



macOS

Cross architecture



x86/64



x86/64



arm32/64

👉 **Result: Start working in 5 minutes and optimize your operations immediately!**

Seamless Device Integration

Connect all your devices without leaving any behind! Proxus supports over 50+ industrial protocols, ensuring seamless integration for all types of devices and systems.

Wide Protocol Support 🌐

Siemens S7, Modbus, OPC UA, MQTT, Allen-Bradley, and many more.

Easy Profile Setup 📝

Quickly define and connect your devices.

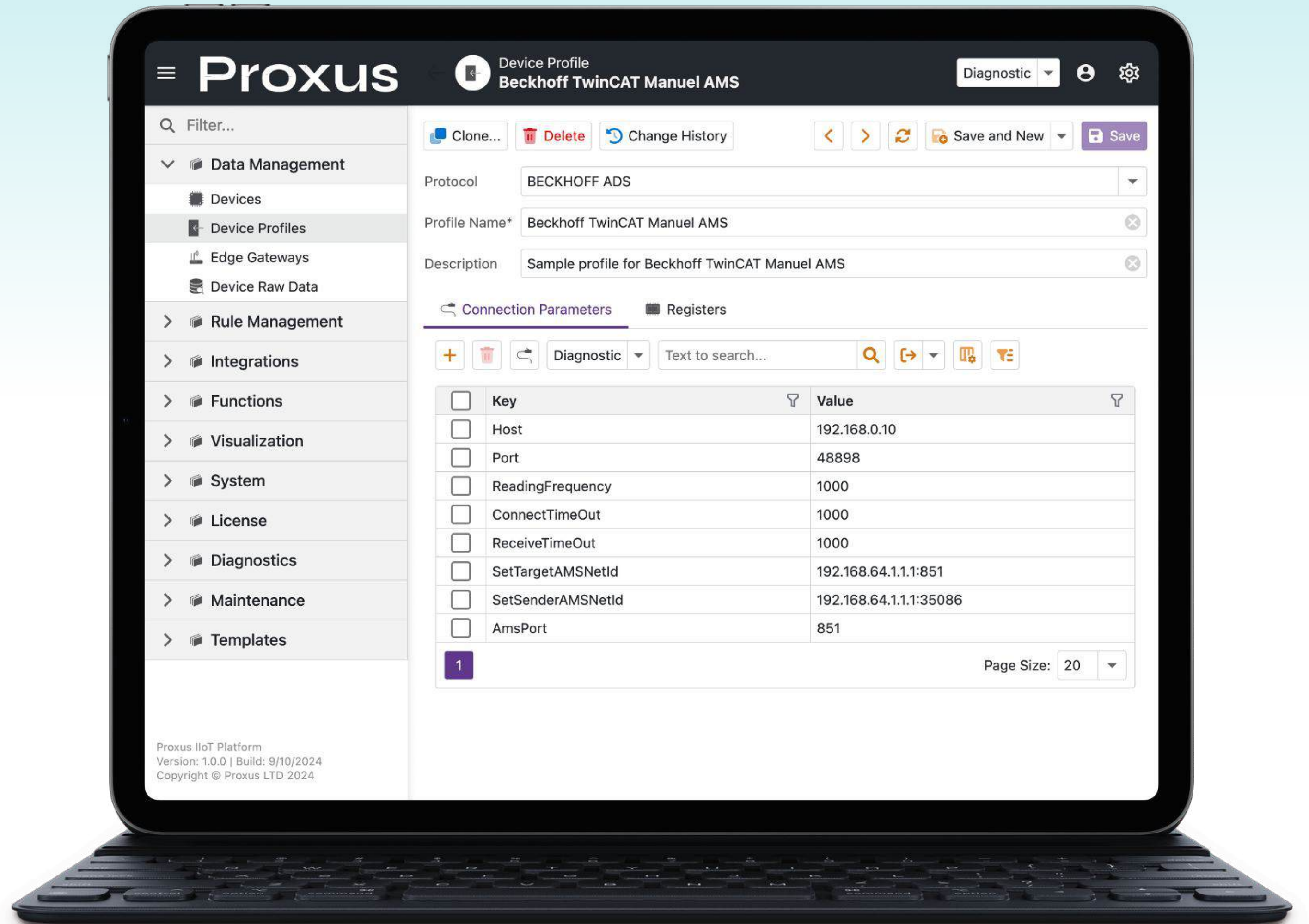
Flexible Targets 🎯

Direct data to your preferred data pools (AWS, TimescaleDB, MQTT, SQL, etc.).

Save 80% on Integration Costs. 💰

Less time and resource usage

👉 **Result: All your devices unite on a single platform, eliminating data chaos!**



Proactive Actions with Smart Rule Engine

Solve problems before they grow! Proxus' rule engine enables proactive actions with real-time analysis.

Visual Rule Creation

Define criteria with drag-and-drop simplicity.

Multiple Notification Channels

Take action via email, SMS, WhatsApp, API calls, and more.

Edge Analysis

Data is processed on-site before reaching the hub.

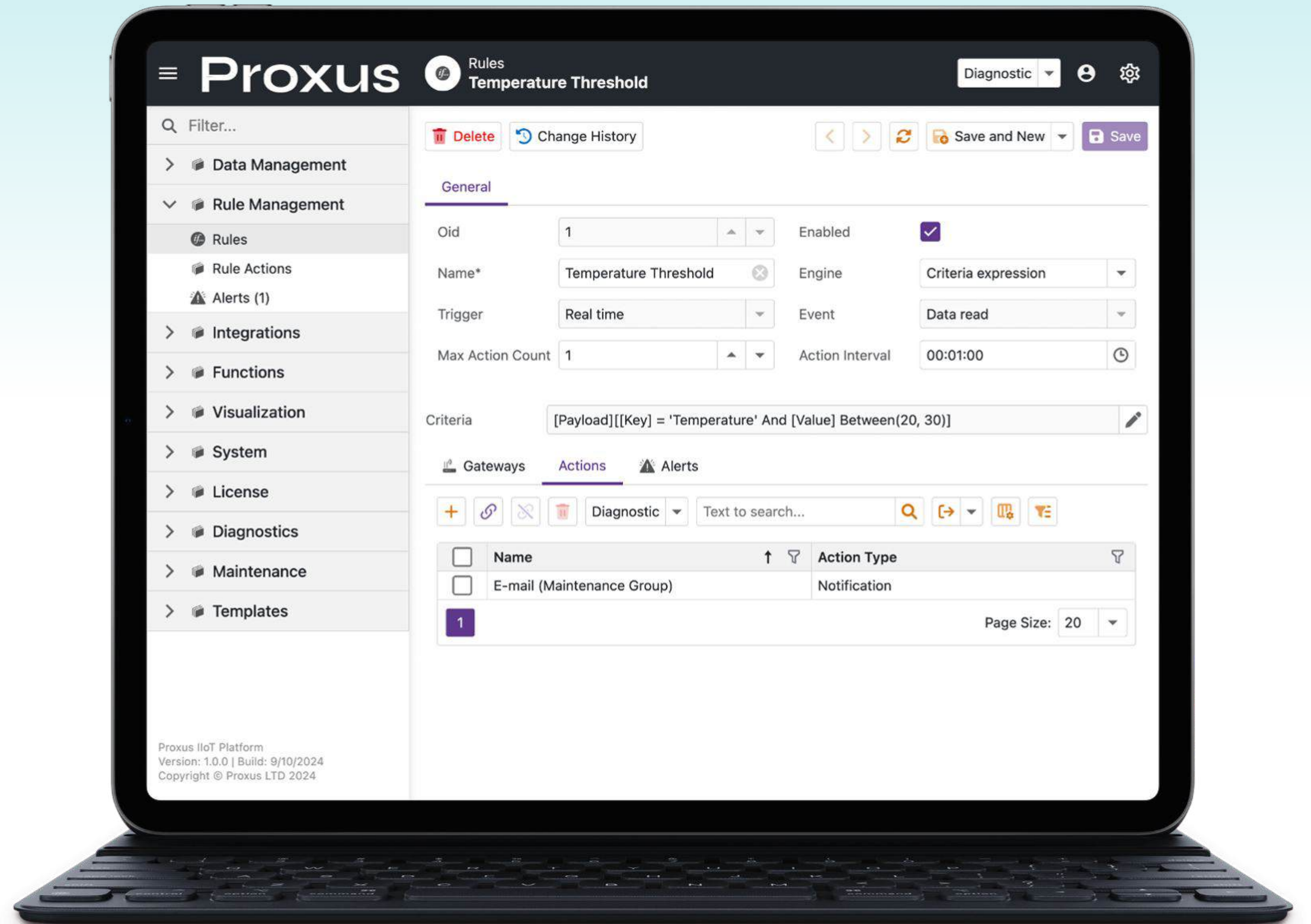
50% Faster Response Time

Prevent delays with instant alerts.

30% Lower Maintenance Costs

Extend the life of devices with proactive actions.

 **Result: Identify problems in advance, minimize losses!**



Dynamic C# User-Defined Functions (UDF)

Create your own analyses and push boundaries! Proxus allows you to develop user-defined functions with embedded C# IDE and SDK.

Dynamic Coding

Run advanced algorithms for real-time data analysis.

Edge Analytics

Execute code on edge devices for instant data processing.

Template Support


Start easily with ready-made function templates.

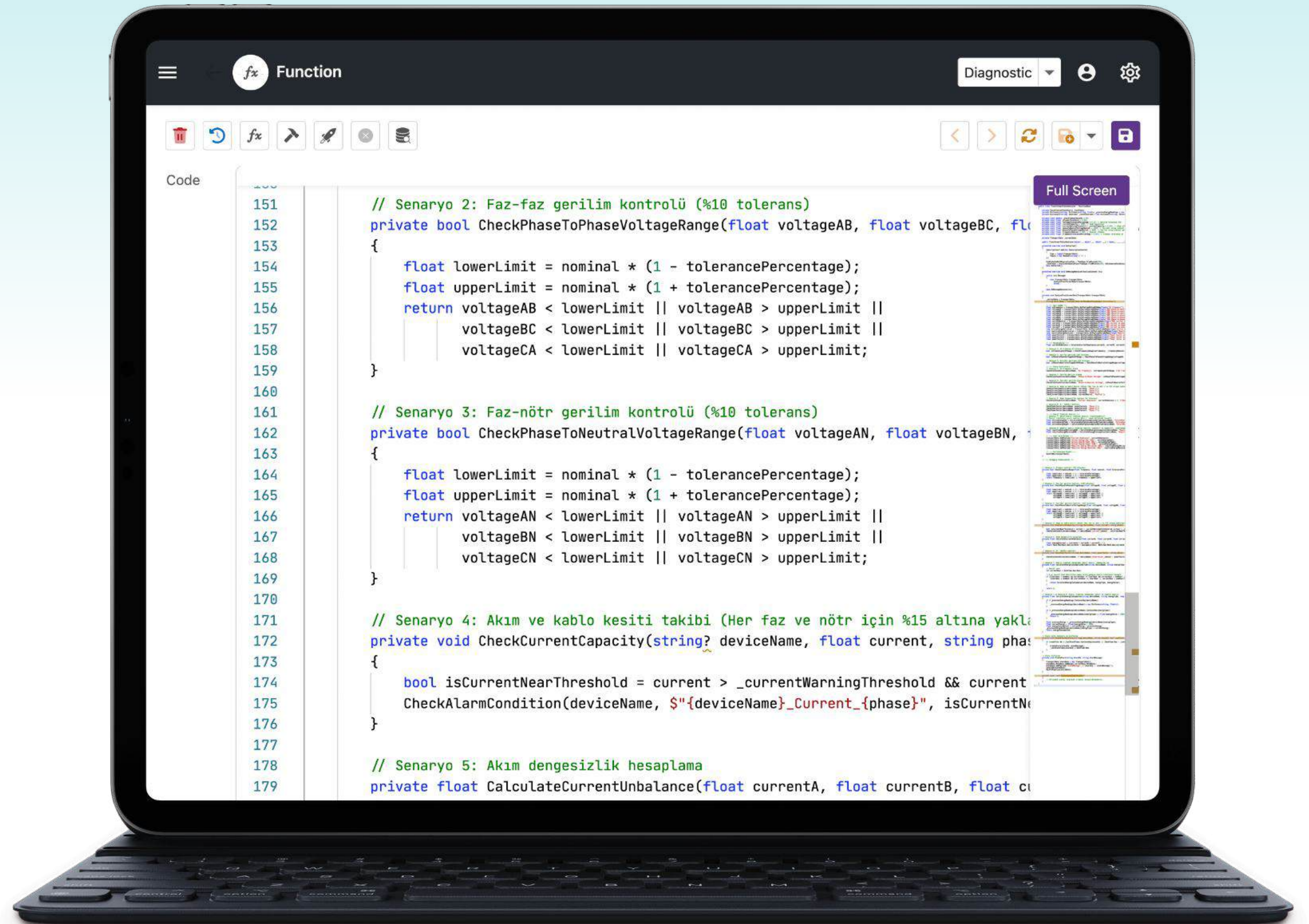
60% Faster Development Process

Easy start with ready-made tools.

Lightning-Fast Analysis

Data is processed instantly, saving time.

 **Result: Enrich your data and develop custom solutions for your business!**



Big Data Storage and Management

Securely store and access your data with Proxus' high-performance and optimized storage solutions.

1 Million+ Inserts per Second 🚀

Easily process and store large volumes of data.

1 Billion Records = ~4.5 GB 📦

Minimize costs with efficient disk usage.

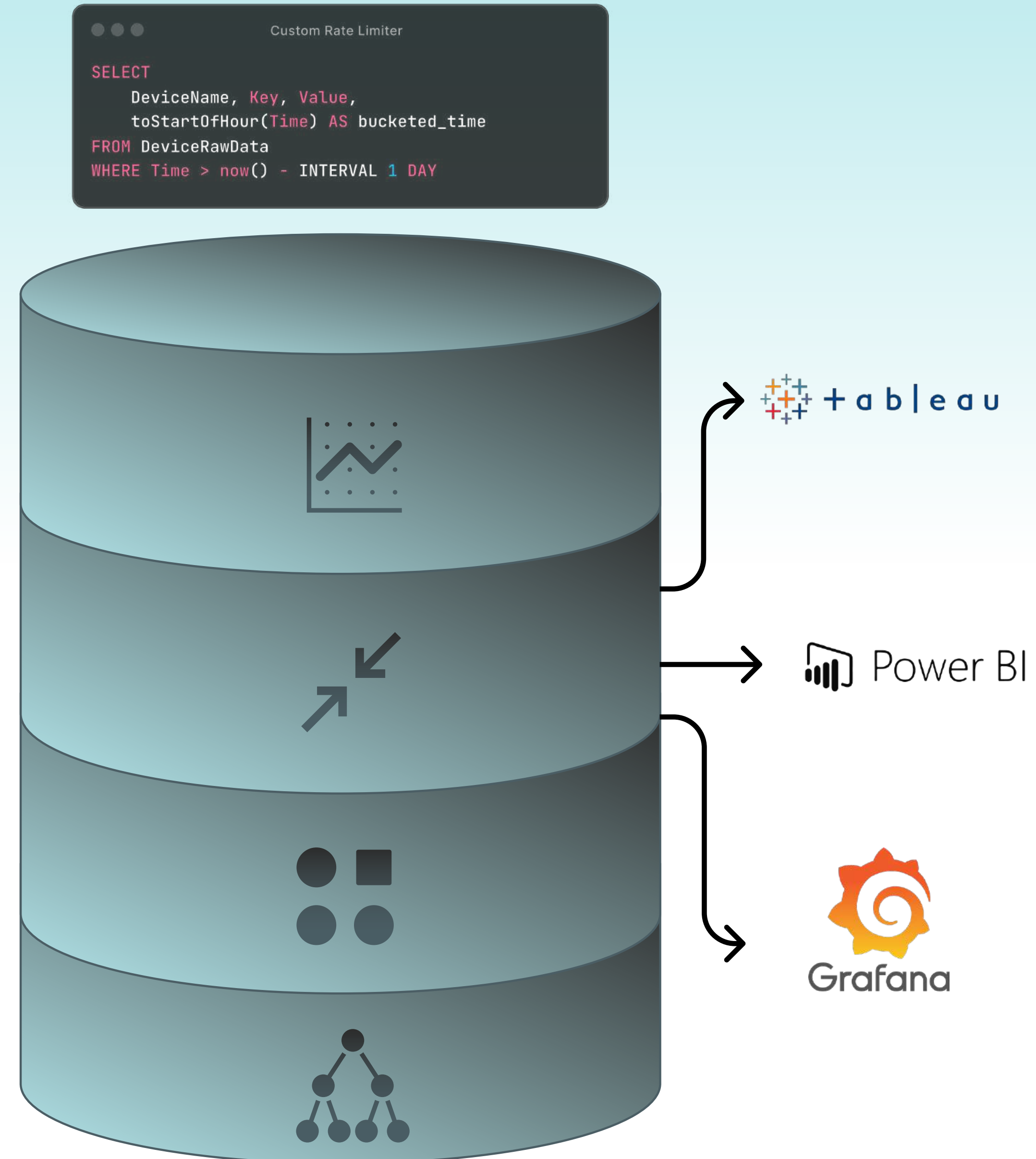
Fast Access ⚡

Query 1 billion records in ~500 ms.

Automatic Data Management 🗑️

Your data is always organized with partitioning and cleaning features.

👉 **Result: Your data is secure, organized, and always accessible!**



Meet AI with Your Industrial Data!

With Proxus AI MCP, artificial intelligence is now an indispensable part of your industrial operations! With Model Context Protocol support, Claude, GPT-4 and other LLMs understand your data and make smart decisions.

Model Context Protocol (MCP) Support

Secure access to your industrial data by Claude, GPT-4, and other LLMs

Natural Language Queries

Get complex reports with questions like "Which machines have low efficiency?"

Smart Anomaly Detection


AI understands your sensor data for automatic anomaly detection and predictive maintenance recommendations

95% Faster Analysis

Complete complex data analysis in seconds

80% Reduced Decision Time

Make fast operational decisions with AI-supported recommendations

 **Result: Understanding your data, making predictions and optimizing has never been this easy!**



```
user@proxus:~$ AI, how are the oven temperatures?
```

```
🤖 AI Assistant:  
Analyzing oven status...
```

```
🟢 Oven_01: 179.96°C (Normal)  
🟢 Oven_02: 178.77°C (Normal)  
✅ Both ovens are operating within optimal temperature range..
```

```
user@proxus:~$ Is there a bottleneck in the production line?
```

```
🤖 AI Assistant:  
Analyzing production flow...
```

```
⚠️ Bottleneck detected:  
- Mixers: 51-53 products/hour  
- Ovens: 43-44 products/hour  
💡 Recommendation: Increase oven capacity by 20%.
```

```
user@proxus:~$ Generate predictive maintenance report
```

```
🤖 AI Assistant:  
📄 Preparing predictive maintenance report...  
🔧 Priority maintenance required equipment:  
1. Mixer_01 - Check within 72 hours  
2. PackagingMachine_02 - Vibration increase
```

Powerful Visualization and Reporting

Visualize your data and make faster decisions! Proxus provides modern, customizable dashboards to make your data meaningful.

Web-Based Interface 🌐

Easy access from any device.

Customizable Dashboards: 📊

Create charts and reports according to your needs.

Real-Time Visualization: 👁️

Understand your data instantly and take action.

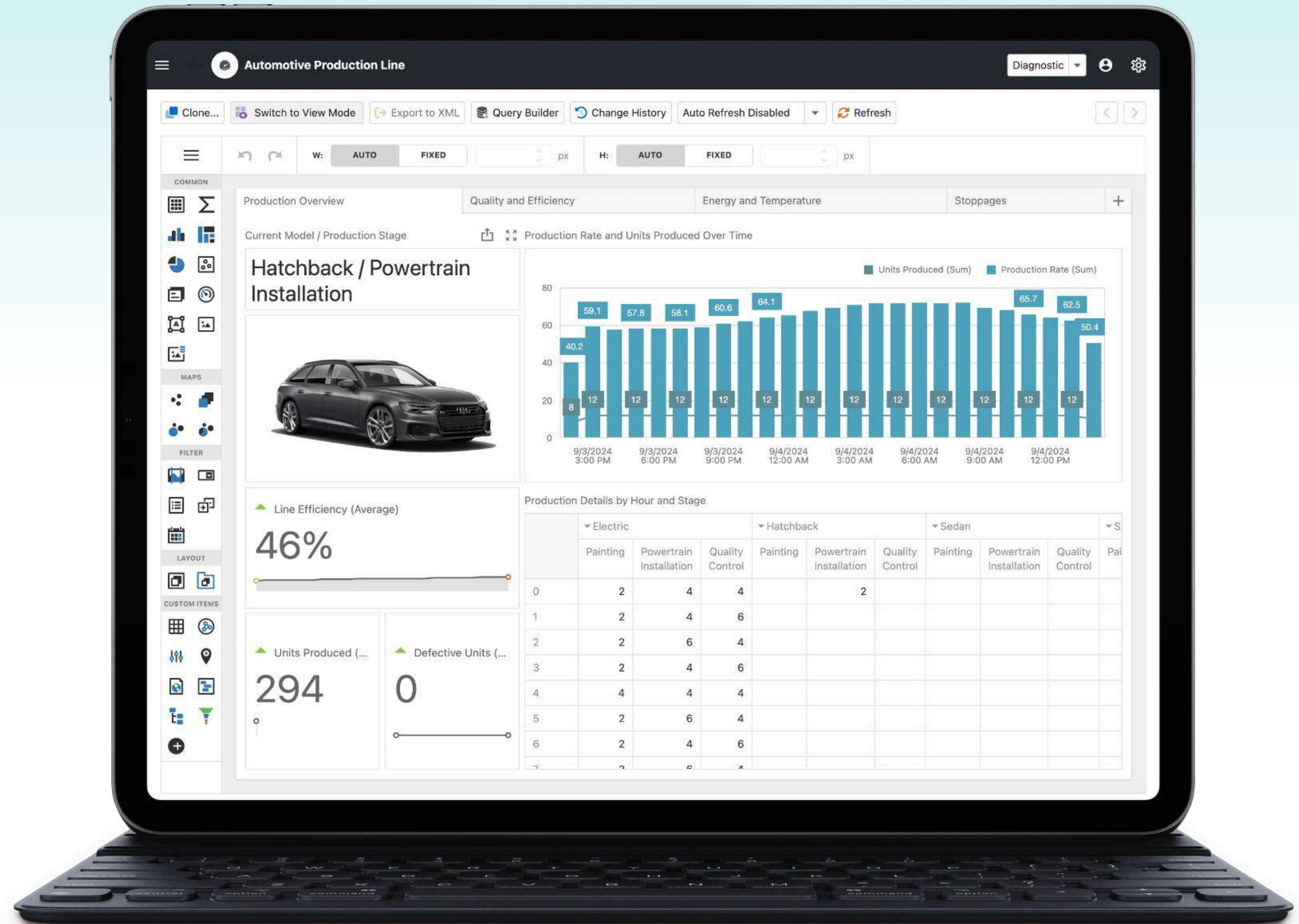
50% Faster Decision-Making Process: ⌚

Data becomes easily understandable.

User-Friendly Interface: 😊

Minimizes training time.

👉 **Result: Simplify complexity and accelerate decision-making!**



Seamless IT System Integrations

Connect all your systems and manage data flow! Proxus easily integrates with ERP, MES, SCADA, and other IT solutions.

20+ IT/Cloud Integration Support: 🤝

Easy connection to your own systems.

API and Webhook Support: ⚙️

Easy connection to your own systems

Real-Time Data Sharing: 🔄

Your data is transferred instantly between systems.

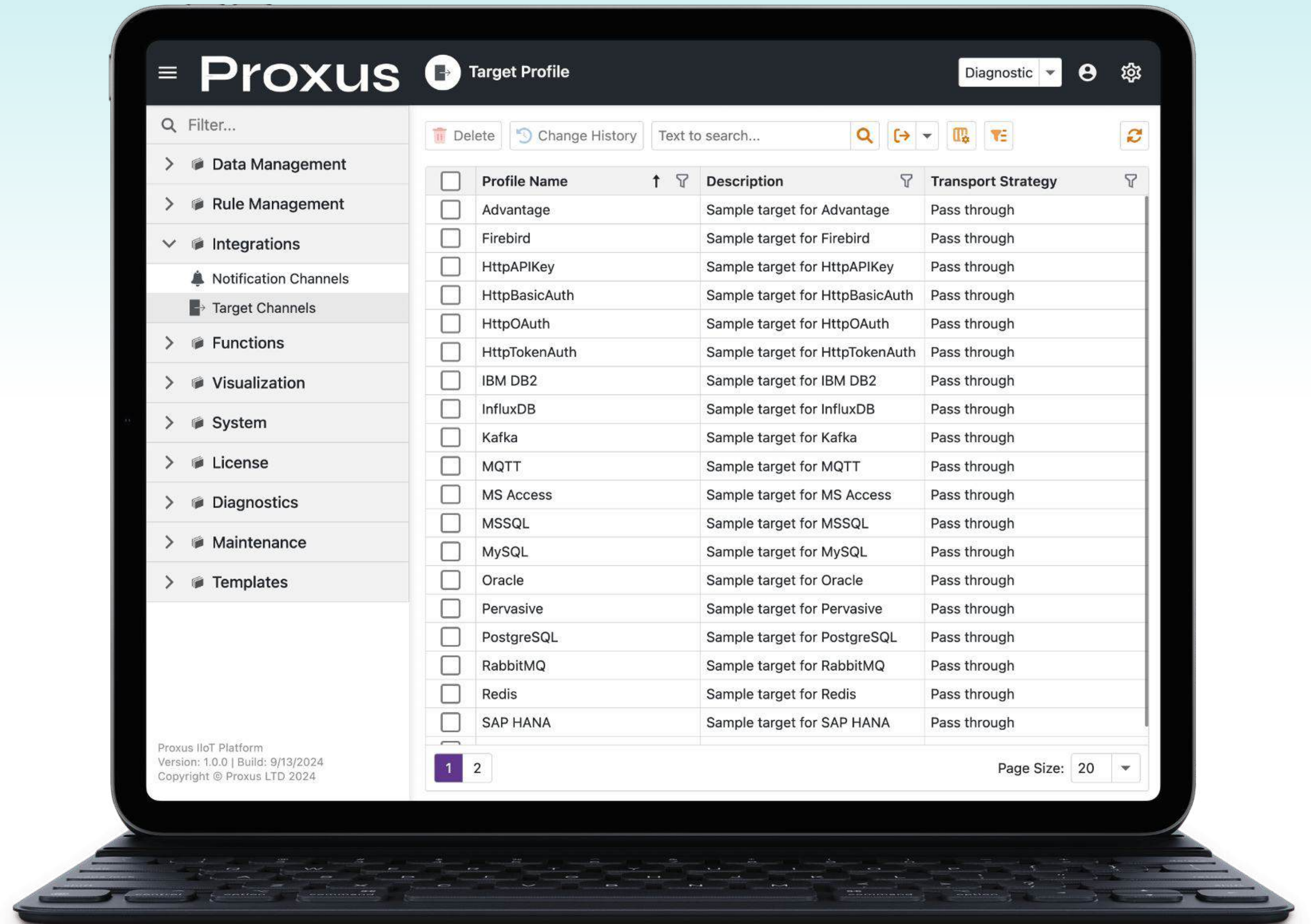
95% Less Integration Time: ⌚

Fast connection with native integrations.

Data Integrity: ✅

Seamless data flow between all systems.

👉 **Result: Your data integrates seamlessly, ensuring uninterrupted operations!**



Edge Computing: Process Data On-Site

Don't send your data to the center—process it where it's generated! Proxus' powerful edge computing architecture ensures speed and efficiency.

Distributed Architecture: 📍

Your data is collected and processed on edge devices.

Real-Time Analysis: 🕒

Instant data processing for quick interventions.

Connection-Independent Operation: 📡

Operations continue even if the connection to the center is lost.

70% Less Data Cost: 💰

Without the need for central storage.

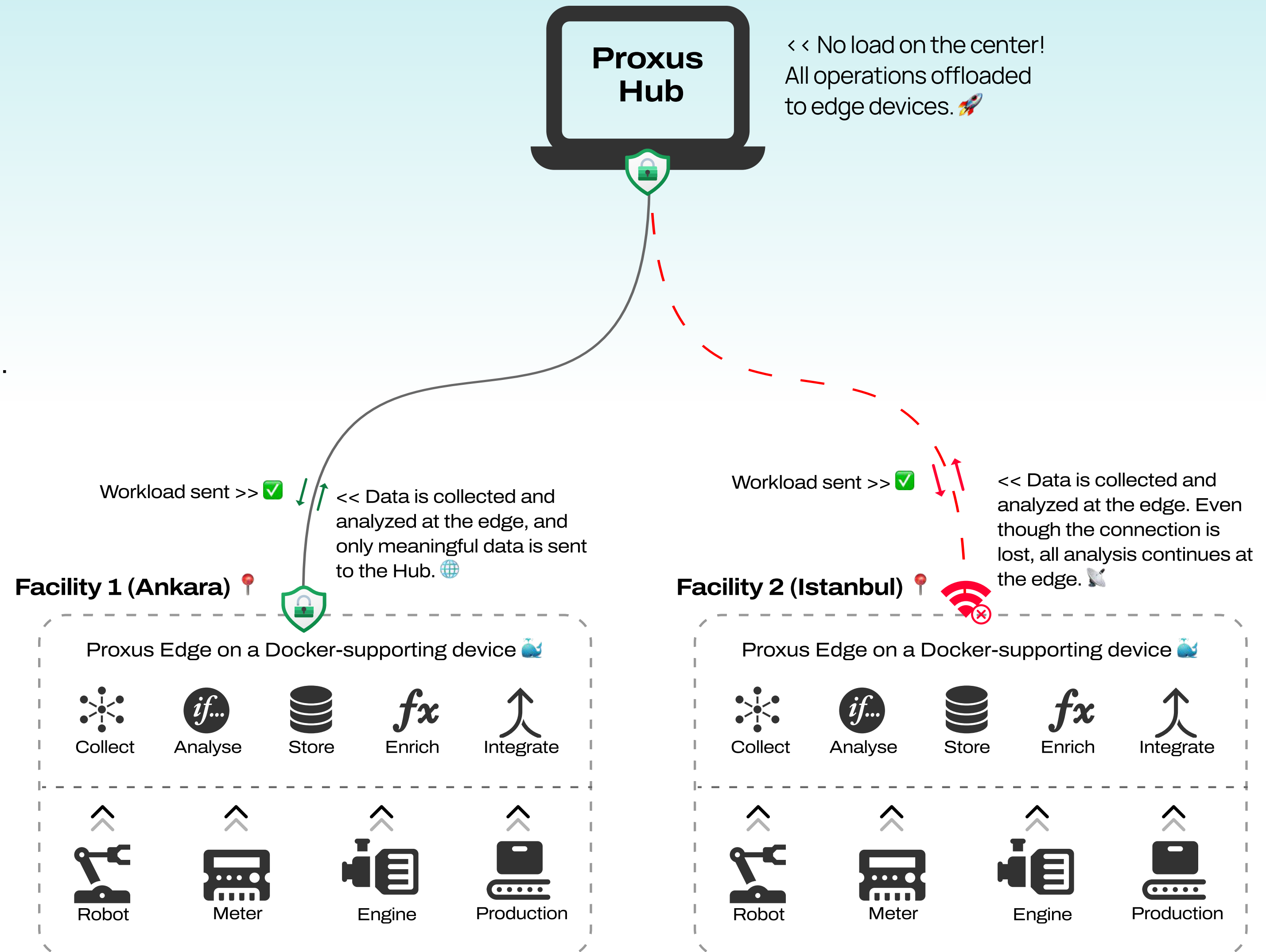
Uninterrupted Operations: 🔄

You don't experience data loss even in connection problems.

Unlimited Scaling: 📈

You can distribute your workloads to the edge.

👉 **Result: Faster analysis, lower latency, reduced network traffic!**



Enterprise-Grade Security

Proxus protects your data and secures your operations!

TLS Encryption:

Data flow and connections are fully secured.

Role-Based Access Control:

Only authorized personnel can access sensitive data.

Audit Logs

User activities can be monitored and recorded.

Local Data Processing:

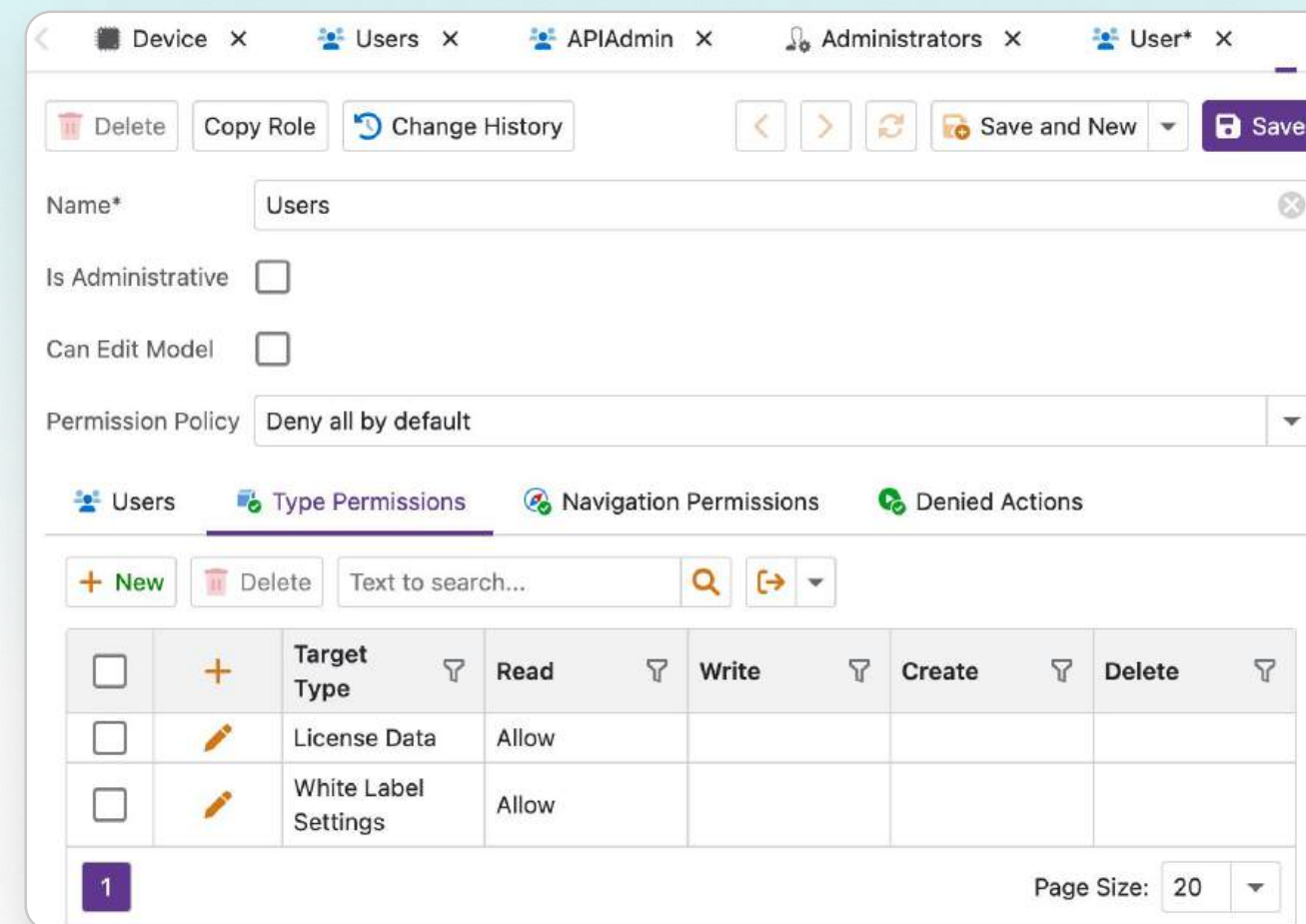
No data loss even in case of connection interruptions.

More Secure Operations:

Eliminates the risks of data loss and unauthorized access.

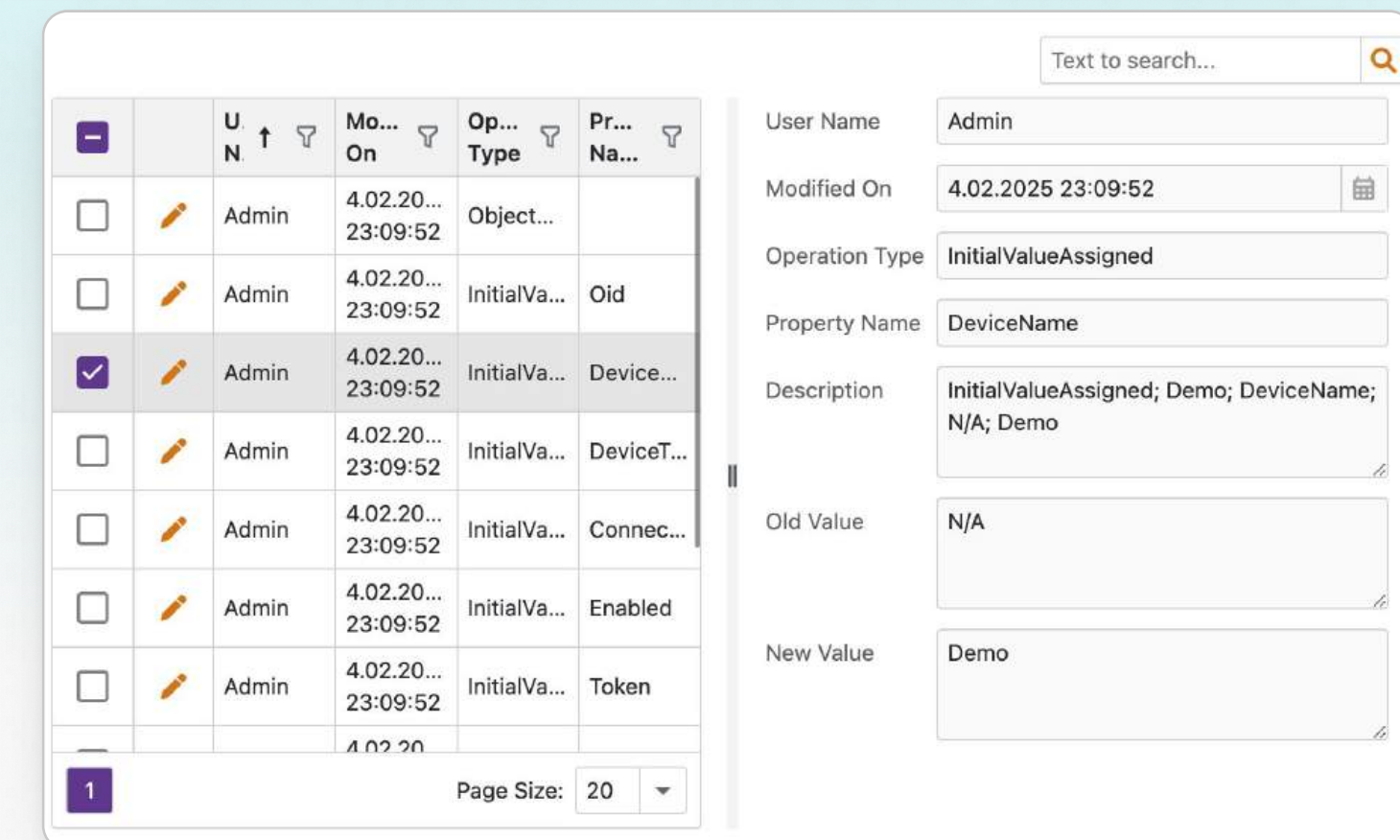
 **Result: Manage and store your data securely, and stay proactive against threats!**

Role-Based Access Control:



The screenshot shows a web-based RBAC configuration interface. At the top, there are tabs for 'Device', 'Users', 'APIAdmin', 'Administrators', and 'User*'. Below the tabs, there are buttons for 'Delete', 'Copy Role', 'Change History', 'Save and New', and 'Save'. The main form includes a 'Name*' field with 'Users' entered, 'Is Administrative' and 'Can Edit Model' checkboxes, and a 'Permission Policy' dropdown set to 'Deny all by default'. Below the form, there are tabs for 'Users', 'Type Permissions', 'Navigation Permissions', and 'Denied Actions'. The 'Type Permissions' tab is active, showing a table with columns for 'Target Type', 'Read', 'Write', 'Create', and 'Delete'. The table lists 'License Data' and 'White Label Settings' with 'Allow' permissions.

Audit Logs:



The screenshot shows an audit logs interface. It features a search bar at the top right with the text 'Text to search...'. Below the search bar is a table with columns for 'U N', 'Mo... On', 'Op... Type', and 'Pr... Na...'. The table contains several rows of log entries, with the first row selected. To the right of the table, there are input fields for 'User Name' (Admin), 'Modified On' (4.02.2025 23:09:52), 'Operation Type' (InitialValueAssigned), 'Property Name' (DeviceName), 'Description' (InitialValueAssigned; Demo; DeviceName; N/A; Demo), 'Old Value' (N/A), and 'New Value' (Demo). At the bottom right, there is a 'Page Size' dropdown set to 20.

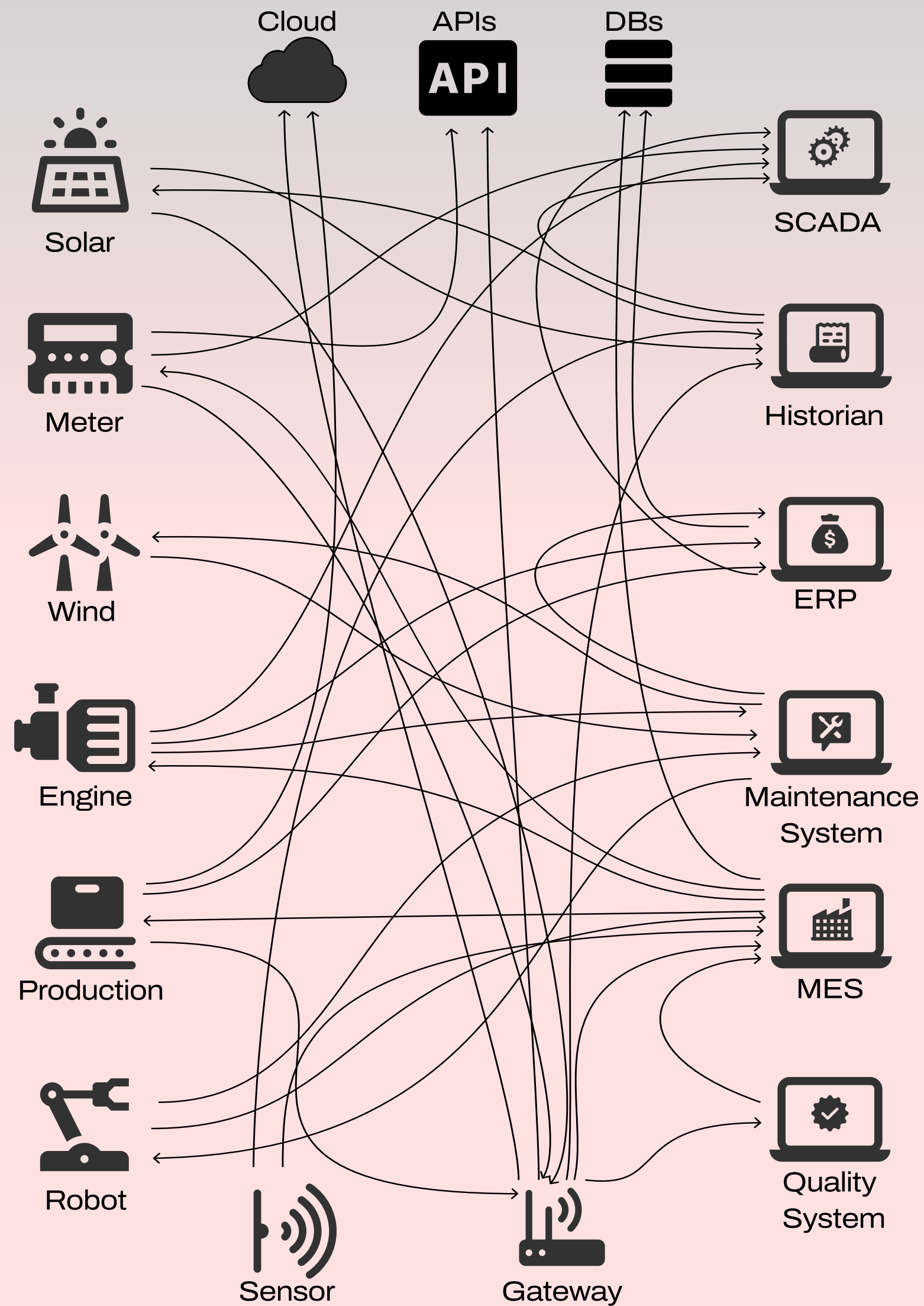
Security Policies:

```
89 [Security]
90 # Enable account lockout after multiple failed login attempts
91 Lockout.Enabled = true
92 # Maximum number of failed login attempts before account is locked
93 Lockout.MaxFailedAccessAttempts = 3
94 # Duration (in seconds) for which the account remains locked
95 Lockout.DefaultLockoutTimeSpan = 30
96 # Password Security Configuration
97 [Security.Password]
98 # Minimum password length requirement (default: 6)
99 MinLength = 6
100 # Maximum password length allowed (default: 128)
101 MaxLength = 128
102 # Minimum number of uppercase characters required (default: 0)
103 RequireUppercase = 0
104 # Minimum number of lowercase characters required (default: 0)
105 RequireLowercase = 0
106 # Minimum number of numeric digits required (default: 0)
107 RequireDigits = 0
108 # Minimum number of special characters required (default: 0)
109 RequireSpecialCharacters = 0
110 # List of allowed special characters
```

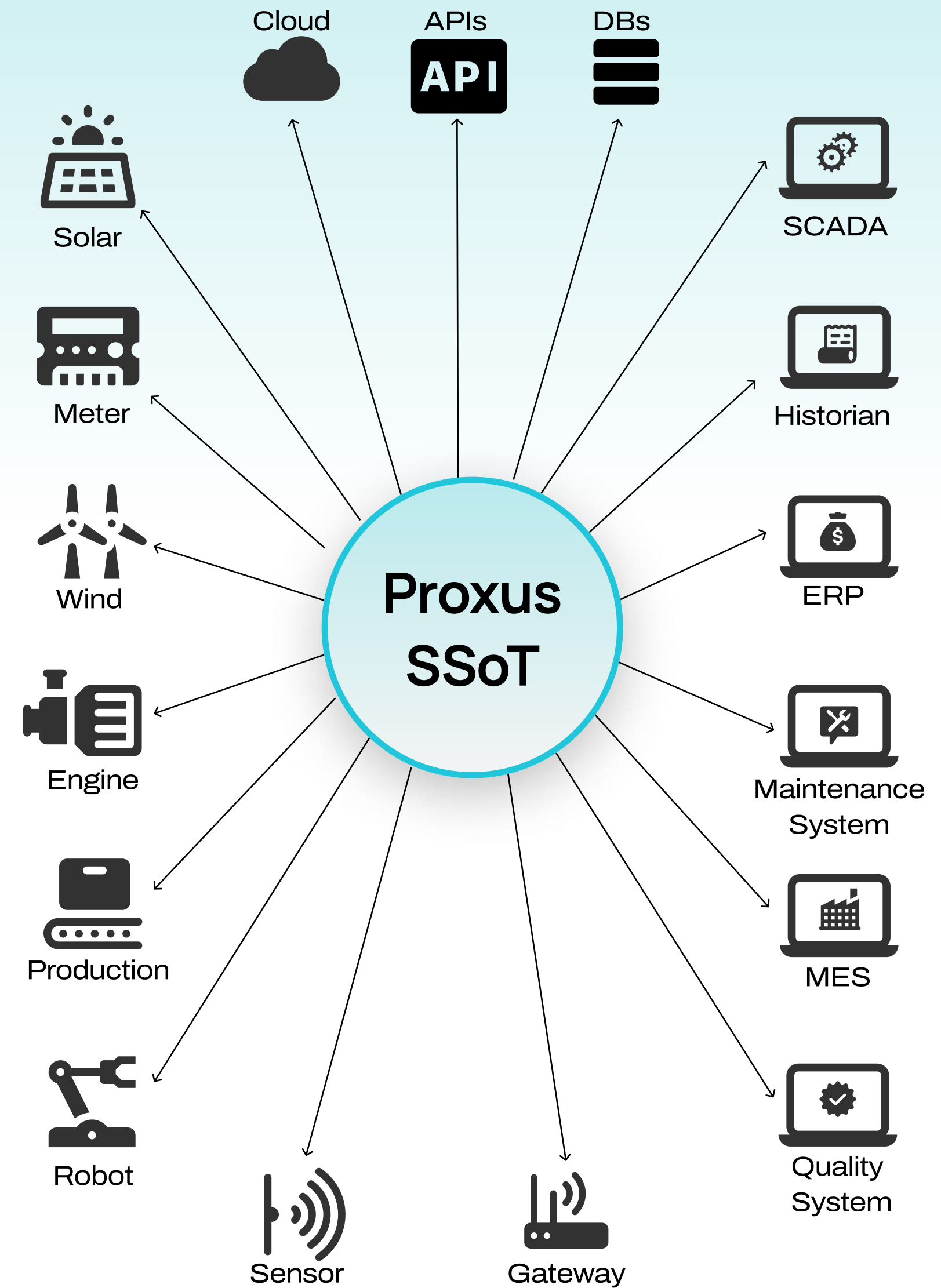
SSL/TLS Configuration:

```
60 [Service]
61 Name = "Proxus"
62 UI-HTTPS-Port = "8443" # Uncomment to enable HTTPS support for UI service. When e
63 UI-Address = "localhost"
64 WEBApi-HTTPS-Port = "8445" # Uncomment to enable HTTPS support for WEB API servic
65 WEBApi-Address = "localhost"
66 Server-HTTPS-Port = "8447" # Uncomment to enable HTTPS support for Server servic
67 Server-Address = "localhost"
68
69 SSL-Certificate-Name = "example.pfx" # Uncomment and set the name of your c
70 SSL-Certificate-Password = "password" # Uncomment and set the password for c
71
72 # [UI] Section - Blazor Configuration
73 [UI]
74 ForceSkiaRendering = true # Enables SkiaSharp rendering for complex graphics (true
75 EnableDashboardExportRestrictedMode = false # Enables restricted mode for dashbo
76
```

❌ Chaos: Traditional Point-to-Point Integrations



✅ Order: Centralized Data Management with Proxus



Success Story: ✨

MEXT Technology Center

Unified Data Management in the Digital Factory



MEXT Technology Center partnered with Proxus to manage data from machines, data centers, and energy infrastructure under a single, consistent, and sustainable architecture for their digital factory projects.

The Challenges:

- Fragmented and inconsistent data across disparate systems ❌
- Lack of visibility into the continuity of data streams ⚠️
- Scalability issues due to increasing data volume 📈
- Data not being "analytics-ready" for reporting 📊

Why Proxus?:

- A single, reliable data model via UNS & SSoT ✅
- Real-time monitoring of data flow, quality, and continuity 👁️
- High-volume time-series data management 🧠
- Seamless integration with enterprise and cloud systems 🔗

The Outcomes ✅: Data was standardized and centralized into a manageable structure. A robust data infrastructure was established, ready for analytics, dashboards, and advanced applications. Digital factory projects were built on a reliable, scalable, and long-term foundation.

Success Story: ✨

Siemens Operational Efficiency in Manufacturing



Siemens Kocaeli Factory collaborated with Proxus to increase operational efficiency in manufacturing, in line with its Industry 4.0 vision.

Problems: ✖

- Inability to collect data from punching and bending machines
- Difficulty in optimizing production processes 📉
- Difficulty in identifying bottlenecks 🚧
- Difficulty in making real-time decisions 🙄

Why Proxus?:

- Easy integration with Siemens Edge devices 🤝
- Powerful data collection capabilities 📊
- Two-way SAP integration 🔗
- AWS cloud platform compatibility ☁

Gains ✅: Proxus collects real-time data by connecting to punching and bending machines. The data is analyzed on Siemens Edge devices, OEE calculations are made, and integrated into the AWS cloud platform. This enables accurate annual capacity planning, optimizes production processes, reduces unplanned downtime, optimizes energy consumption, and achieves a more efficient production line. 🚀

Success Story: ✨

Kaltun Mining Digital Transformation in 15+ Facilities



Kaltun Mining chose Proxus to digitize its operations with more than 15 ore processing facilities and a large fleet of vehicles.

Problems: ❌

- Inability to collect data from facilities, vehicles, and solar plants 🌐
- Difficulty in increasing operational efficiency 🐌
- Difficulty in reducing costs 💰
- Difficulty in optimizing energy production ⚡
- Difficulty in improving occupational safety ⚠️

Why Proxus?:

- Integration with all data sources thanks to scalability 🌐
- Support for different protocols 🤝
- Advanced analysis capabilities 🧠
- Easy integration with cloud platforms ☁️
- Ability to collect data from solar plant systems ☀️

Gains ✅: Proxus collects data in facilities, vehicles, and Solar Power Plants systems. The data is analyzed to generate reports on equipment performance, fuel consumption, production volume, energy production, and occupational safety. This eliminates inefficiencies, reduces costs, increases occupational safety, and ensures a more sustainable mining operation. 🚀

Success Story: ✨

PilenPak

Digital Transformation Begins with Proxus



PilenPak partnered with Proxus to enable real-time data collection from production equipment and drive operational efficiency.

The Challenges:

- Inability to collect data across all equipment types ✖
- Difficulties in optimizing production processes 📉
- Lack of real-time visibility into energy consumption ⚡
- Delays in real-time decision-making ⌚

Why Proxus?:

- UNS & SSoT: Consistent information flow with a "Single Source of Truth" ✔
- Multi-Protocol Support: Native connectivity for OPC UA, Modbus, MQTT, and more 🌐
- Advanced Analytics & Reporting: Anomaly detection and interactive dashboards 📊
- Oracle ERP Integration: Bi-directional data flow for live planning and inventory management 🔗

The Outcomes ✔: Proxus collects real-time data from the shop floor, analyzes OEE and energy efficiency, and seamlessly integrates this intelligence into Oracle ERP. As a result, capacity planning has become more accurate, production cycles have accelerated, unplanned downtime has decreased, and energy consumption is fully optimized.

Trusted Technology by Leaders:

SIEMENS



Sinan Baş
Data Analytics & Digital Director, KPMG Türkiye



"I was skeptical when Proxus was suggested after spending months with the MING stack on a large and distributed project. However, seeing it solve in minutes what took us months in the PoC surprised me. Undoubtedly, it has the best price/performance ratio I have ever seen in an IIoT platform."



Kaan Mutluel
Digital Transformation Leader, Kaltun Group



"With more than 15 ore processing facilities and over 150 fleet vehicles, we needed accurate data to increase operational efficiency and reduce costs. Proxus, thanks to its scalability and multi-data source integration, enabled us to collect data from all our facilities and vehicles. With advanced analytics capabilities and cloud integration, we can now make real-time decisions, eliminate inefficiencies, and create a more sustainable mining operation."



Eryetiş Yaman
Associate Director, IIoT | BigData, Turkcell



"As Turkcell, we offer smart city solutions to municipalities and electricity distribution companies thanks to our partnership with Proxus. The biggest advantage of Proxus is its distributed edge capabilities. It minimizes latency by processing the data from sensors on-site and enables real-time decision-making. In this way, we contribute to making cities smarter, more efficient, and more sustainable."

Proxus

Experience a paradigm shift in industrial data management by unifying all functions in a single solution with Proxus.

www.proxus.io

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[in/volkanalkilic](https://www.linkedin.com/in/volkanalkilic)