30% production growth achieved with **Devs Ex Macchina®**

Maximize Steel Manufacturing Quality and Efficiency

Discover how a leading steel mill in Spain achieved a 30% boost in output with our automation solutions.

In the fast-paced environment of a steel mill, every second counts.
For a leading steel manufacturer in Spain, outdated systems were causing critical delays in production, hindering efficiency and output. Recognizing the need for change, they partnered with Devs Ex Machina® to overhaul their process, streamline operations, and eliminate costly bottlenecks.

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The Problem

Outdated Systems Slowing Down Steel Production

With every minute lost, tons of steel were left unprocessed. The company faced the reality: **How much potential was slipping through the cracks due to an outdated system?**

A large steel mill in Spain was facing serious operational inefficiencies. The existing automation system could not keep up with the growing demands of modern steel production. Delays in communication between the machines and the central control system were causing production bottlenecks.

At the core of the problem was that the old system took up to 30 seconds to provide instructions for next steps in the production process. Operators frequently faced uncertainty, and inefficiencies in the Java-based system—especially with its garbage collection—led to frequent manual restarts, further crippling productivity.

In a high-demand, time-sensitive environment like a steel mill, this was unacceptable.

Delays like these weren't just frustrating; they were costly, reducing the plant's overall productivity and profitability. The issue wasn't the machines' performance, but rather the system's inability to communicate fast enough.

The Devs Ex Macchina® solution accelerated communication speed by 97%, reducing delays to just 0.8 seconds.

86% reduction in critical delays achieved with **Devs Ex Macchina®**

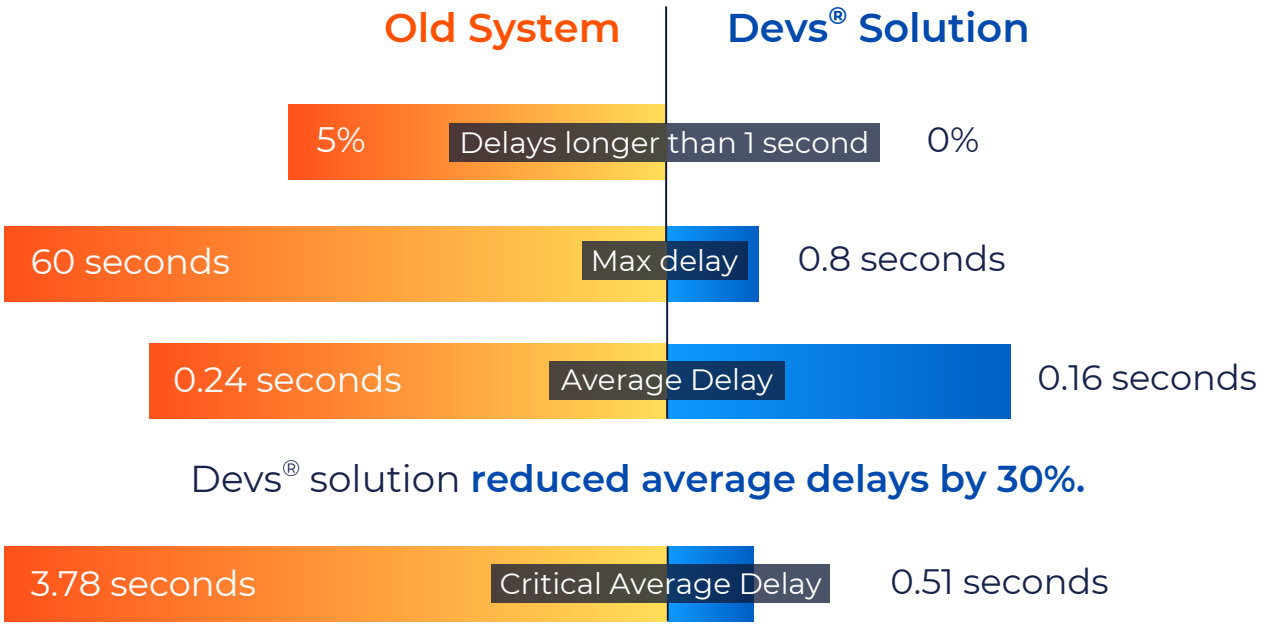
The Solution

Transforming Manufacturing Efficiency with Real-Time Data and Automation

Aleph ONE implemented a custom high-performance automation solution that **dramatically improved processing speed and reliability.**

The new system significantly reduced processing delays and system instability at Level 2 (process control), which in turn improved the performance of Level 1 (machine control). This optimization enhanced the workflow and ensured real-time system responses.

The transition from the old system to the new one was seamless, ensuring uninterrupted production while improving both performance and user experience.



Devs® solution **reduced average delays by 30%.**

Devs® solution **reduced critical delays by 86%.**

30% reduction in average delays achieved with **Devs Ex Macchina®**

The Results

Optimized Performance, Enhanced Productivity

"The mill never stopped production, and the operators didn't even notice when the switch happened. The result? An operation that ran like a well-oiled machine, 24/7, with no hiccups or downtime."

- Pavle Dragišić, Software Engineer at Aleph ONE

30% Increase in Production

Streamlined processes led to a production increase from 400,000 tons to 510,000 tons of steel per year.

Faster Response Times

Immediate task processing reduced delays to nearly zero.

Ease of Use

The intuitive HMI interface made the system easy to operate for non-technical staff, reducing training time and operational complexity.

Greater Stability

Unlike the previous Java-based solution, the new system does not require frequent restarts, enabling uninterrupted, reliable operations.

Improved Efficiency

Reduced system delays significantly enhanced operating efficiency.

97% faster communication achieved with **Devs Ex Macchina®**

Lower Infrastructure Costs

Reduced server requirements lowered the customer's infrastructure costs, with hardware investments potentially cut by 30%.

24/7 Support

Devs® team provided round-the-clock support with remote access capabilities, ensuring prompt issue resolution while maintaining operational continuity.

Enhanced Operator Experience

Long waits and uncertainty caused by slow system responses were eliminated.

Operators received clear, easy-to-understand instructions.

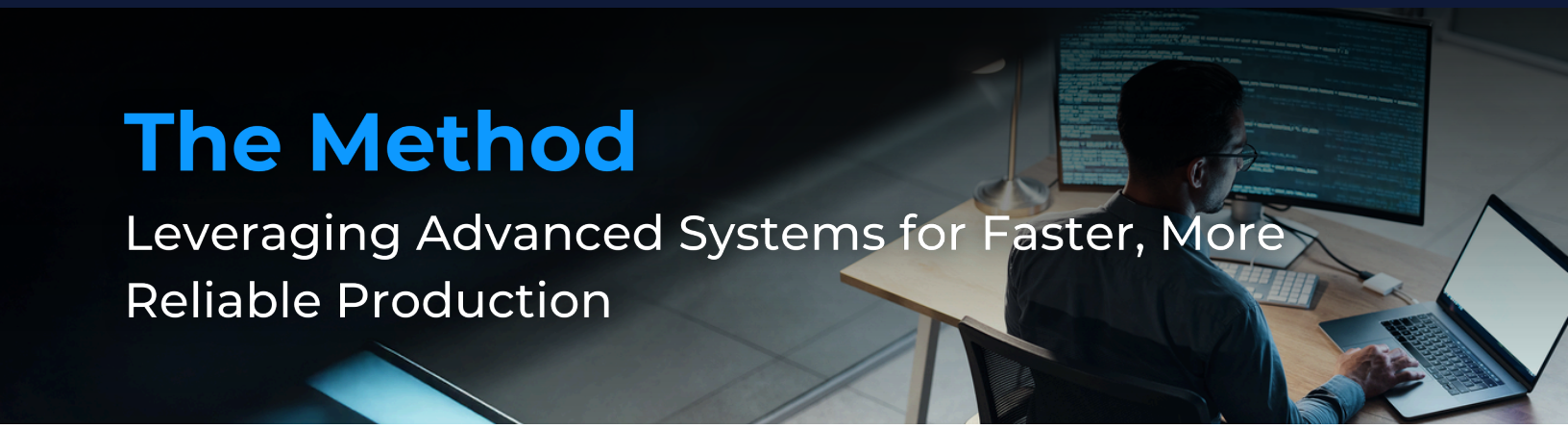
The system was designed with both maintenance engineers and operators in mind, enabling them to efficiently manage operations without advanced technical knowledge.

Ready to achieve similar results?

Schedule a consultation to find out how Devs Ex Macchina® can help unlock your business' maximum potential.

Schedule a consultation

97% faster communication achieved with **Devs Ex Macchina®**



The Method

Leveraging Advanced Systems for Faster, More Reliable Production

Devs Ex Macchina®: Collects data from various devices, integrates them into a unified format (including raw data or JSON), and presents the information to users, allowing them to focus on decision-making and actions based on insights. This aligns with the system's goal of improving efficiency and reducing delays through seamless data management and automation.

POCO C++ Libraries: Enable direct communication with hardware, eliminating the inefficiencies of Java-based systems and accelerating system response times.

HMI (Human-Machine Interface): Provides operators with an intuitive interface to monitor and control the system without the need for advanced technical skills.

JavaScript Engine Bridge to C++: Enables custom scripting and flexibility for future expansions and modifications.

PLC Integration: The system seamlessly connects to existing Programmable Logic Controllers (PLCs), ensuring compatibility with the steel mill's infrastructure while supporting standard industrial protocols.

Ready to apply our proven strategies?

Discover how Devs Ex Macchina® methodology can work for you.

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