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# THE ESSENTIAL INDUSTRIAL AI BUYER'S GUIDE

Selecting the Ideal  
Industrial AI Process  
Optimization Solution



**Together we'll build a sustainable tomorrow**

## Selecting the Ideal Industrial AI Process Optimization Solution

In the rapidly evolving landscape of industrial manufacturing, choosing the right AI-powered process optimization solution is essential for achieving both profitability and sustainability, and maintaining consistent yield and quality under changing market conditions.

This guide will help you identify the key features and internal preparations necessary for successful and rapid enablement.

### WHAT TO LOOK FOR IN AN INDUSTRIAL AI SOLUTION

#### 1. Industrial-Grade AI You Can Understand and Trust

Seek solutions offering white-box AI algorithms that provide transparency in decision-making processes. Unlike black-box solutions, white-box AI & ML provides clear insights into the decision-making process, allowing your team to understand and trust the recommendations and allows for better integration of human expertise with AI recommendations.



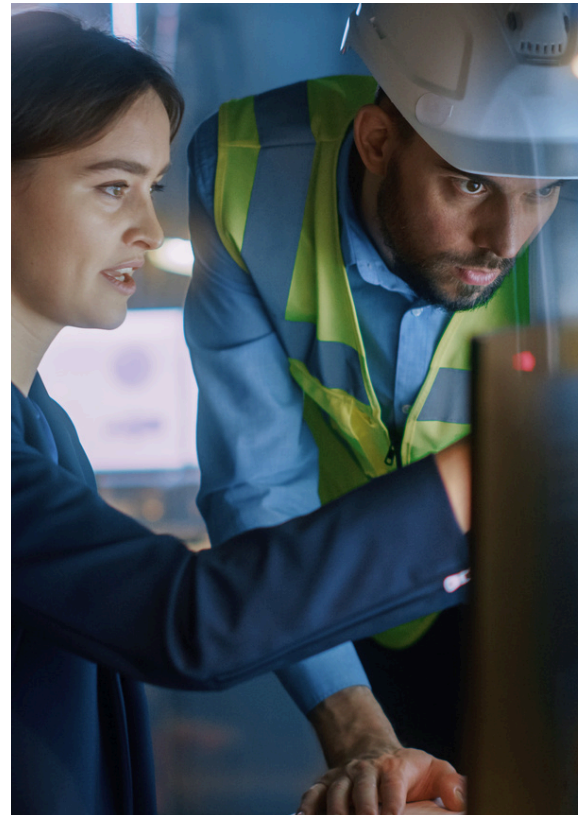
Solutions without industrial-grade explainable recommendations are less likely to be followed by operators which limits its potential value.

#### 2. Robust Data Integrations

Look for platforms that can seamlessly integrate with your existing data sources and systems. This capability ensures a comprehensive view of your operations and enables more accurate optimizations.



This step can be a significant roadblock to deployment at pilot and license stage.



### 3. Explicit Use Case Templates

Choose a solution that offers pre-built templates for common industry use cases. These templates can accelerate implementation and provide immediate value in specific areas of your operations.



Without clear and tactical use cases, procurement and deployment teams can spend weeks or months trying to identify the right use case with valued outcomes.

### 4. Profitable Sustainability

Select a platform that explicitly targets both cost savings and emissions reduction. This dual focus ensures that environmental responsibility aligns with financial performance, helping you achieve profitable sustainability to future proof your factory.



Without the ability to address both objectives together, and to quantifiably track impact in real time, plants will favor one goal over the other.

### 5. Digital Twin Capabilities

Opt for solutions that can seamlessly create accurate digital twins of your processes. These virtual models allow for risk-free experimentation, optimization, and training opportunities before implementation in the real world.



Without this simulated environment, teams are less likely or able to innovate and experiment using a live production which limits growth opportunities.

### 6. AI-Powered Production Optimization

Ensure the platform uses advanced AI algorithms to continuously optimize production processes, adapting to changing conditions in real-time. Ensure the platform can provide live recommendations based on constantly shifting production conditions, and explainability of its decision-making. This capability allows operators to gain trust in the solution's decisions and to make immediate adjustments, maximizing efficiency and minimizing waste.



Teams without this capability will continue to work in silos where knowledge is not readily shared.

## 7. Product Flexibility

Choose a solution that can handle a wide range of products and processes, allowing for optimization across your entire product portfolio. Each industrial sector has unique needs. Even plants within the same organization require flexible customization to adapt to their specific processes and limitations.



Without code-free flexibility, plants will have limited application of the solution's capabilities, which limits the solution's value potential.

## 8. Proprietary Models

Look for platforms that offer proprietary models tailored to your industry and specific plant needs. These specialized models often provide more accurate and relevant insights than generic solutions.



Using an open-source model or one which is trained across multiple plants or sectors will not provide the most relevant insights or recommendations for your unique requirements.

## 9. Cross-Functional Collaboration

Choose a solution that enables seamless collaboration between process engineers, data scientists, and operators. This integration of expertise leads to more comprehensive and effective optimizations.



Without this capability, teams and individuals will continue to work in silos which will limit cross-functional knowledge sharing and training opportunities.

## 10. Confidence Metrics

Select a solution that provides confidence bands on every prediction, allowing your team to make decisions with a clear understanding of the associated risks and certainties.



Confidence metrics can indicate how confident a solution is at staying in-spec with a recommended production change. This gives the worker confidence to override a recommendation or to suggest an alternative action to find a new recommendation.

## 11. User-friendly Interface

Select a platform that can be effectively used by team members with varying levels of data science expertise, empowering a wider range of employees to contribute to optimization efforts. Ensure the solution provides a simulated environment for rapid offline testing and experimentation, as well as live optimization to support your team's production efforts.



Platforms that require time-consuming certifications to operate will limit the number of workers who can and will engage with it. This will limit the value that it can provide to each worker and to the organization.

## 12. Scalability and Customization

Look for a no-code solution that can easily and rapidly scale and customize across multiple processes and facilities, providing a unified approach to optimization throughout your organization.



A platform without this ability will provide limited value opportunities and will be too slow to adapt to changing market and production conditions.



# INDUSTRIAL AI BUYER'S GUIDE:

## What to establish internally for rapid deployment success

### 1. Dedicated Procurement and Implementation Team

Form a cross-functional team responsible for selecting, implementing, and managing the AI solution. This team should include representatives from operations, IT, and management.

### 2. Priority Management

Clearly define and prioritize the use cases and processes where the AI solution will be implemented. This focus ensures resources are allocated effectively and results are achieved quickly. Avoid testing “the impossible” use case as the pilot. This will not provide the fastest way to identify the value that the industrial AI solution can bring to your team compared to traditional methods.

### 3. Change Management

**Operations:** Develop a comprehensive plan to retrain operators on the new AI-driven processes. This training should emphasize the benefits of the new system and how it will enhance their work. Refer to [this article](#) for essential AI skills and training.



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**Plant Managers:** Fero's industrial AI survey identified that Plant Managers are key influencers to champion or block procurement and full deployment of an AI solution. Ensuring plant managers are actively involved will increase post pilot enablement.

**IT Approval:** Work closely with your IT department to ensure smooth integration with existing systems, particularly for historical data integration. Seek a solution that can run a pilot with or without this integration, in order to keep on top of procurement timelines.

**Finance:** Engage the finance department to share key cost details so production teams can easily identify the economic impact of their activities. This solution can also be accessed by finance departments to monitor how a production's activities are tracking towards their economic goals.

### 4. Holistic Business Integration

Implement the AI solution as part of a broader digital transformation strategy, rather than just supporting incremental process improvements. This approach ensures maximum value across the entire organization.

# THE FERRO LABS PROFITABLE SUSTAINABILITY ADVANTAGE

## The Fero Labs solution stands out by offering:

- Explicit focus on profitable sustainability, balancing cost savings with emissions reduction
- Contextual white-box machine learning for transparent, trustworthy decision-making
- Confidence bands on every prediction, ensuring informed decision-making
- Proprietary models tailored to individual plants and industry's specific needs like steel, chemicals, cement, oil and gas
- Advanced digital twin capabilities for risk-free optimization and experimentation
- User-friendly interface accessible to all team members without extensive data science backgrounds or training requirements
- AI-powered simulated production optimization with real-time adaptability
- Seamless integration with existing data systems and sources
- Industry-specific use case templates for rapid deployment
- Flexibility to handle diverse product portfolios and processes

## FERRO LABS CUSTOMERS EXPERIENCE:

- An average 233% return on investment
- Over 91,000 metric tons of CO2 emissions saved per year
- An average of 5% in EBITDA increase on optimized/deployed production
- Up to 90x faster analysis and optimization compared to traditional methods
- Profitable improvements in product quality and consistency



# CHOOSE FEROLABS

By choosing the Fero Labs Profitable Sustainability Platform and implementing the recommended internal preparations, manufacturers can deploy quickly and confidently optimize their processes, reduce costs, and minimize environmental impact.

The platform's unique combination of no-code industrial-grade explainable AI, comprehensive integration capabilities, and industry-specific expertise enables companies to make data-driven decisions that drive both profitability and sustainability across their entire operation.

Take the next step towards transformative industrial optimization by scheduling a live demo with Fero Labs today.

[Book a meeting](#)

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