

Template for AI Use Case

This template is designed to identify production processes where industrial AI can help optimize operations.

BEFORE STARTING

Challenge/Opportunity

- Why is this a challenge or an opportunity? Provide context, such as frequent breakdowns, seasonal variations, or recurring quality issues. Include specific examples to illustrate the problem or opportunity.
- How often does this issue occur, and what methods are currently used to address it?
- Include a screenshot (e.g., p&id diagram) of the process with visible tag names. Use consistent formatting, such as clear labeling of equipment and tags, a high-resolution image for readability, and annotations to highlight relevant parts of the process.

Business value of solving the problem

- What is the potential business impact of addressing this use case? Consider extending calculations to include a 5-year perspective to assess long-term benefits and roi. This provides a more comprehensive view of potential savings or improvements.
- How will solving this issue improve the process? What types of downtime or inefficiencies will be avoided? Optimizing processes to operate closer to defined thresholds can significantly reduce waste. Explore the potential to cut waste by 50% and assess the financial or operational value this would bring to the company.

Measuring success or improvements

- Define success criteria. Can improvements be quantified? Examples might include reduced waste, lower energy consumption, improved product quality, or increased production. To make the process actionable, consider using a framework such as comparing current KPIs to industry standards, estimating ROI based on historical data, or conducting a pilot project to validate assumptions.
- What is the current baseline for these measurements?

Data availability

- Do we have access to the necessary data to effectively address this use case? Use a checklist to verify data availability and quality, considering factors like historical completeness, consistency, and relevance. Identify and specify where data resides, such as in AVEVA System Platform, SQL databases, automated logging systems, or manual spreadsheets. Clarify whether data collection is automated or manual. Tools like data profiling software or platforms for validating real-time data can also help assess readiness.
 - Are historical data available for training machine learning models?
 - Can relevant data be streamed in real time?
 - Are new sensors required to collect the necessary data?
- Clearly specify:
 - **Output tag:** [Specify the main output tag related to the issue]
 - **Highly relevant input tags:** [List essential data points/tags]
 - **Potentially relevant input tags:** [List secondary or supplementary data points/tags]

RESULT

How Did Intelcy Help Solve the Case?

- Specify the role of AI in addressing the challenge. Examples:
 - Enabled data-driven decision-making.
 - Provided insights to improve processes.
 - Delivered forecasts to guide proactive actions.
 - Detected deviations to prevent failures or inefficiencies.

Results and Benefits

- What were the measurable outcomes? Include tangible and intangible benefits. For example, similar use cases have shown results such as a 15% reduction in energy consumption through predictive maintenance, a 10% improvement in product quality by optimizing production parameters, or cost savings.
- Examples include:
 - Hours saved.
 - Improved material consumption through precise process control, optimizing threshold utilization with data-driven predictions and analyses.
 - Percentage reduction in waste or emissions.
 - Percentage improvement in product quality.
 - Financial savings or avoided costs.