

# Industrial Machine Learning

*"Intelecy is used to navigate in a jungle of data and is pointing us in the right direction. We use Intelecy to put the data in context and identify correlations. This allow us to improve production-quality."*

*-Kjetil Holstad, Production Manager  
TINE Jæren*

## Cleaner

- Reduce CO2 emissions
- Reduce resource wastage
- Reduce energy consumption

**Reduce greenhouse gas emissions by 40%**

## Safer

- Early warning detection
- Safer workplace
- Protect critical information

**Avoid downtime and accidents**

## More Efficient

- Reduce downtime
- Increase production efficiency
- Improve quality

**Increase production efficiency by 25%**

- Empowers the industry workers and engineers
- Provides insight into complex production processes
- Provides easy and fast access to production data
- Automates the building of machine learning algorithms
- Using SCADA data to automatically build an asset model
- Detects anomalies in near real-time
- Enables fast and efficient root-cause analysis
- Integrates easily with your existing industrial control systems and historians.

## Why Intelecy?

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You could buy a generic data science platform and hire expensive consultants to build your own custom machine learning algorithms.

Or you can get started immediately by using Intelecy to continuously improve your production and keep and strengthen the experience and production insight in your company.



Cleaner

### Compliance and environmental

Many industrial companies have ambitious goals to have more sustainable production. In order to actually meet these goals informed decisions need to be made and changes need to be implemented.

What if you could identify and predict waste of energy?  
What if you could predict leakages, emissions or accidents?

An Inteclay customer built a model to predict the temperature of the wastewater 60 minutes into the future. This model helped the customer reduce the impact on the local wastewater system and to produce in compliance with national regulations. Next step is to use the predictions to automatically adjust the production to avoid peaks in temperature.



Safer

### Clogged filter

Filters are often used to keep larger objects away from pumps. They are often simple in design and requires regular maintenance.

A common mode of operation is to keep steady flow by regulating how much a valve is open. In this customer case there is a filter all the water must pass through. When the filter gets clogged the valve will respond by opening more than usual and an anomaly warning gets triggered. This early warning is triggered a week before it's critical and corrective actions can be made before an unwanted shutdown.



More efficient

### Leak detection

Multivariate Anomaly detection is a powerful tool to detect leakages and other anomalies in pipes.

Infrastructure customers are using Inteclay to build anomaly detection models that detects leaks in their systems. The models are based on data from 100s of related sensors distributed in and around the relevant pipes. The models are learning the complex correlations between the different sensors over time and will flag any significant deviations between what is actually measured and what was predicted.

Identified anomalies are being further investigated to identify the root cause of the anomaly and then take action to improve the situation.



