

# Industry 4.0 IoT

## In-process Control

**Developing an in-process control system to eliminate the need for inspection process after completion!!**

**Amazing low cost, innovative high performance!**

### What is in-process control?

It is the machine that controls the decision good or bad, while in the past processed products manufactured by machines were inspected and judged if they were good or bad. As an in-process controlled machine produces only good products as a result, the inspection process is unnecessary and the yield rate becomes 100%.

\*When an abnormality can be detected by the AE sensor

### In the conventional production process...



Good or bad is determined by inspecting the processed products the machine produced

### In the in-process control...

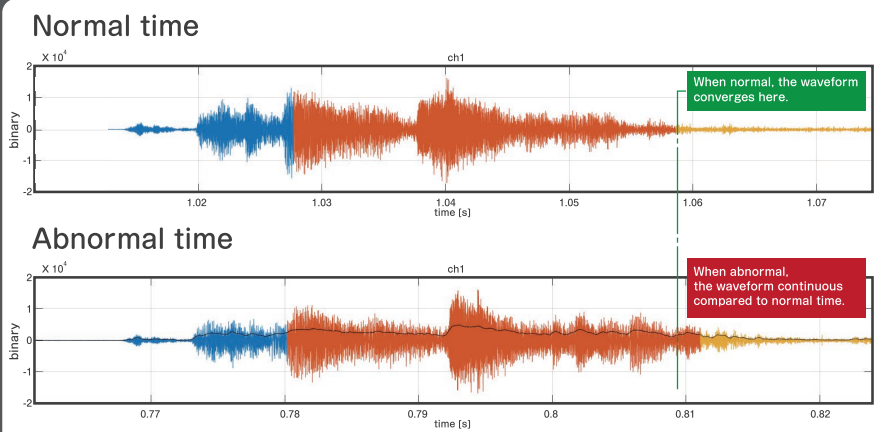


Machine manages good or bad judgment

### Good or bad judgement

Good or bad judgment is performed by installing a highly sensitive AE sensor on the machine and analyzing the data (waveform) acquired by the AE sensor at the time of processing with an edge PC. However, the analysis method is very difficult, and KS-TECH has carried out demonstration experiments many times to acquire a large amount of data and is aiming to commercialize it now.

The data (waveform) acquired by the AE\*1 sensor is analyzed by the edge PC when it is normal and abnormal, and it is judged whether it is abnormal or not.



## RMSS remote maintenance support system

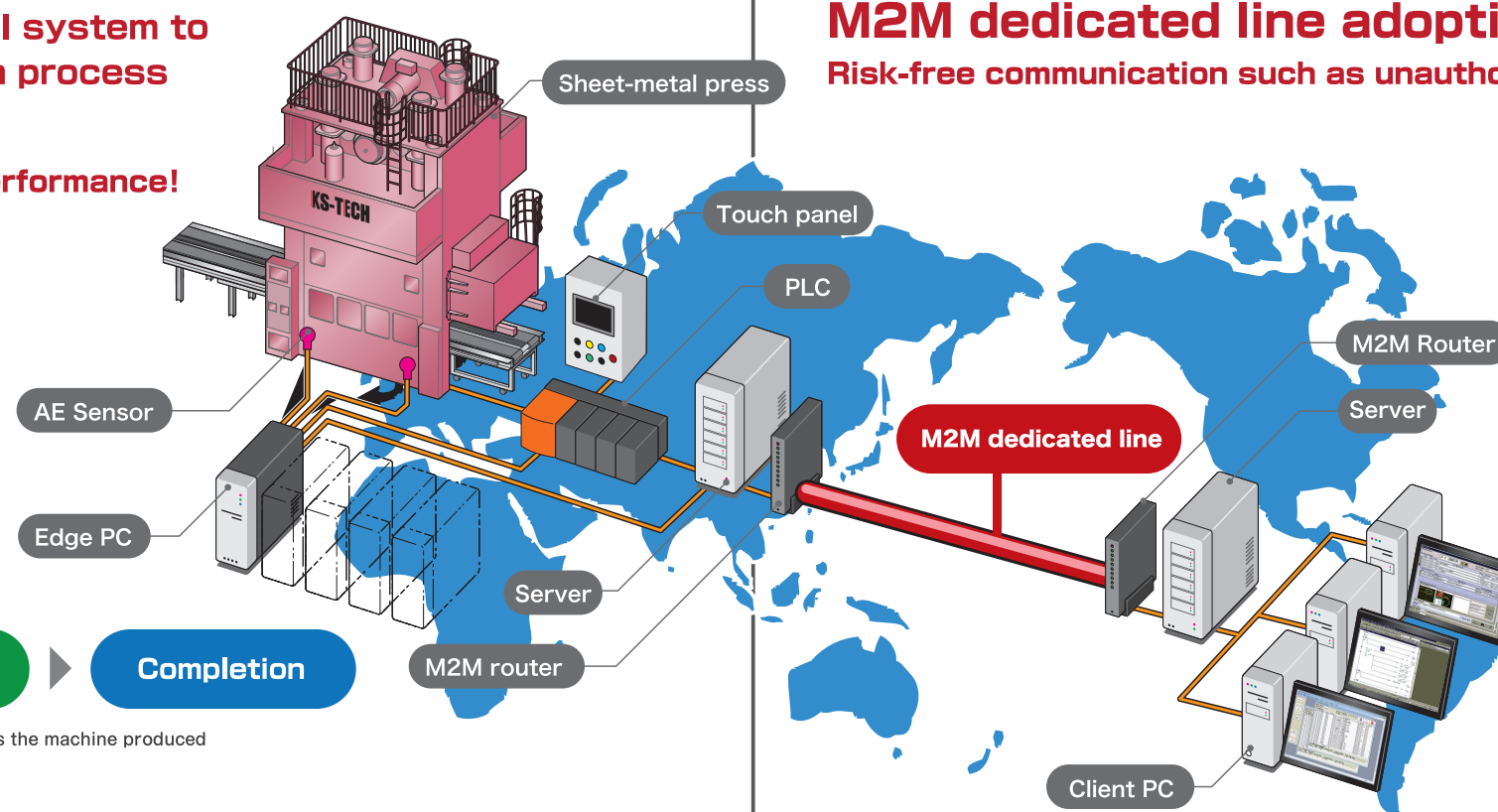
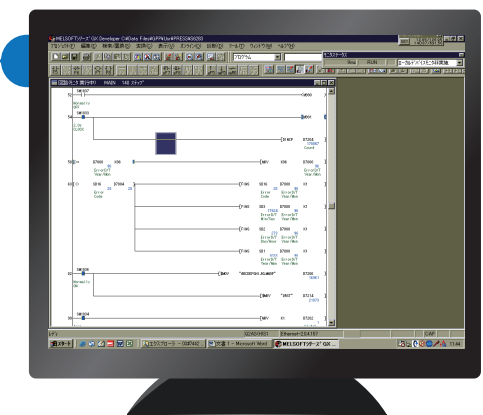
### M2M dedicated line adoption

**Risk-free communication such as unauthorized access and virus intrusion realized.**

### Untroubled connection!

#### PLC engineering tool cooperation

It displays and monitors the relevant part of the PLC program for the occurred abnormality.



### Movable monitor

Logging and analysis of the movable data of operating time of equipment and alarm occurrence etc. are done, and it advises on preventive maintenance.

#### Recorder function using the graph

