

Anomaly Noise Detection IoT Solution for Predict Maintenance

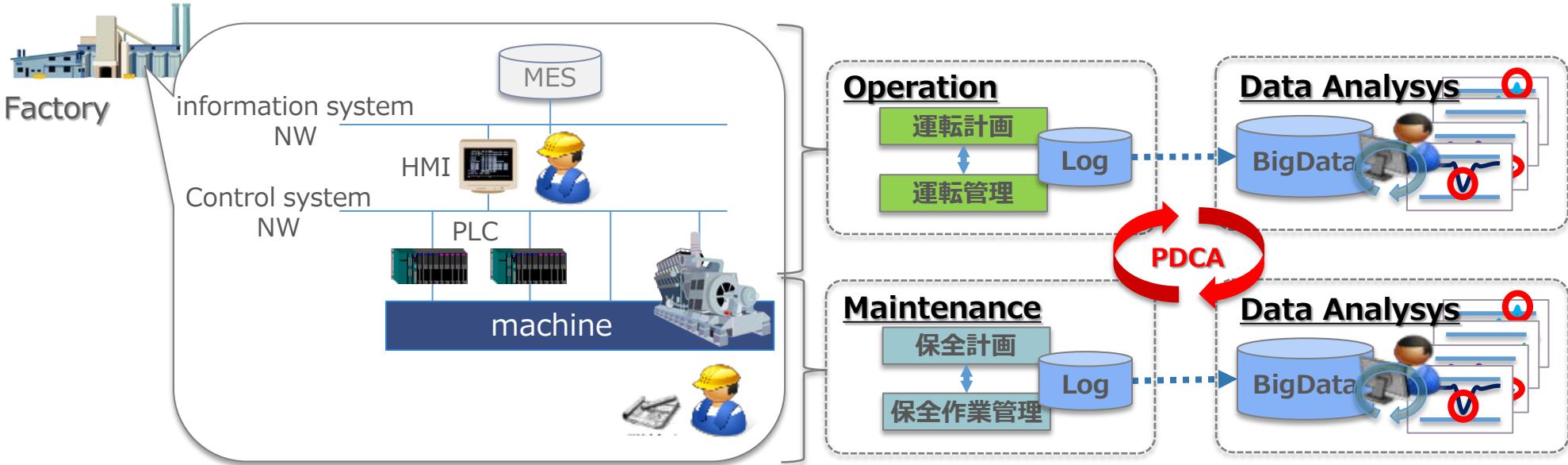


1. About Anomaly Noise Detection IoT Solution

2. Case : huge machine predict maintenance

1. Anomaly Noise Detection IoT Solution Approach for smart factory

Best solution is three type of analysis combination.

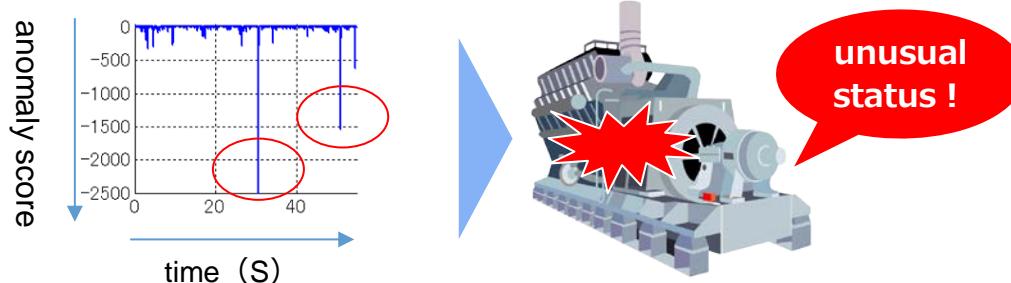
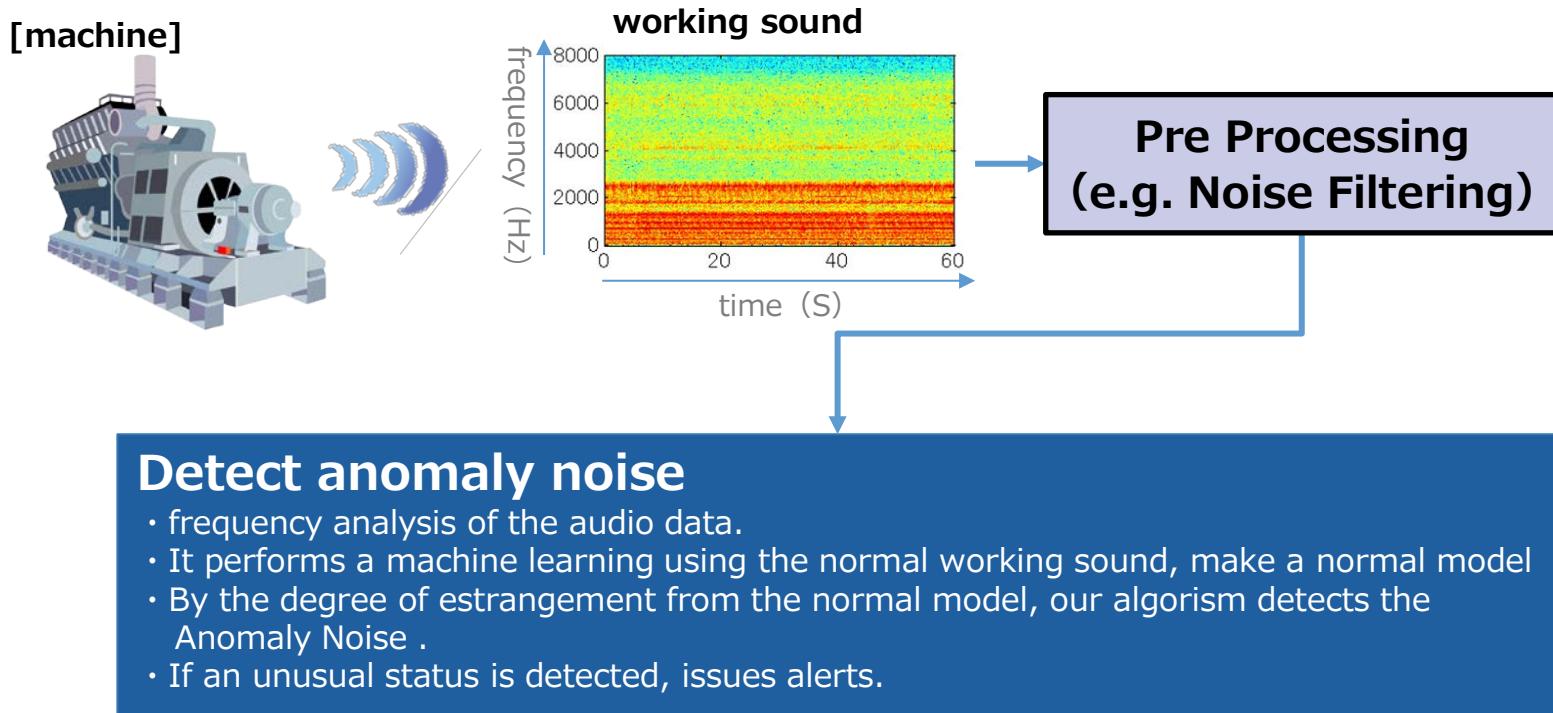


	Work	Current condition	Project	Example of solution
operation	exist working-data	1 working log analysis	Analysis NC/PLC/OPC	
	Non-exist working-data	2 environment data analysis	Analysis working sound	
maintenance	exist maintenance data, but making by text	3 maintenance log data analysis	Analysis Un-structure data, such as history log	

1. Anomaly Noise Detection IoT solution

Overall of the solution

- Via Anomaly Noise Detection IoT solution, we can detect anomaly noise from machine.
- This algorism was invented by NTT corp.,Japan.



1. Anomaly Noise Detection IoT solution feature

■ Feature of Anomaly Noise Detection IoT solution is below,

①Can detect with high accuracy the unknown abnormal sound

- Prior learning of abnormal sound is unnecessary : Learning of normal sound & Detect deviated-anormal-sound from normal area
- Original algorism for machine-sound-noise (invented by NTT group)

②Can discriminate abnormal sound under noisy environment

- It is possible to suppress the ambient noise
- so It has the adaptability to a variety of site environment of factories, etc.

③Realize online remote monitoring

- In real-time analysis process, it enables timely abnormal sound detection.
- By taking advantage of the cloud, it can be centrally monitor the status of multiple facilities and locations from remote

④Don't need to prepare expensive machine

- General microphone and PC + our Software

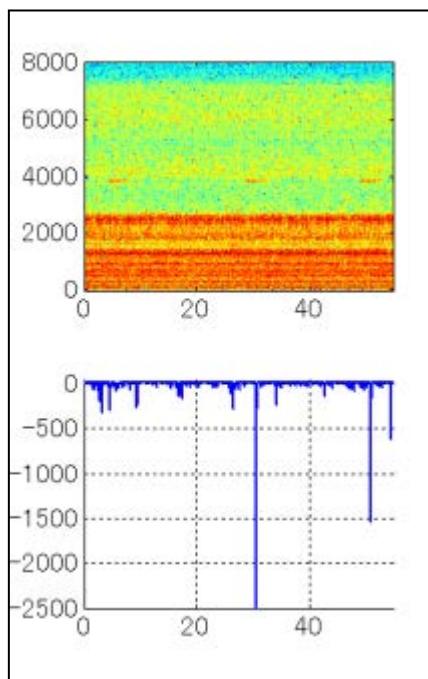
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2. Case : huge machine predict maintenance

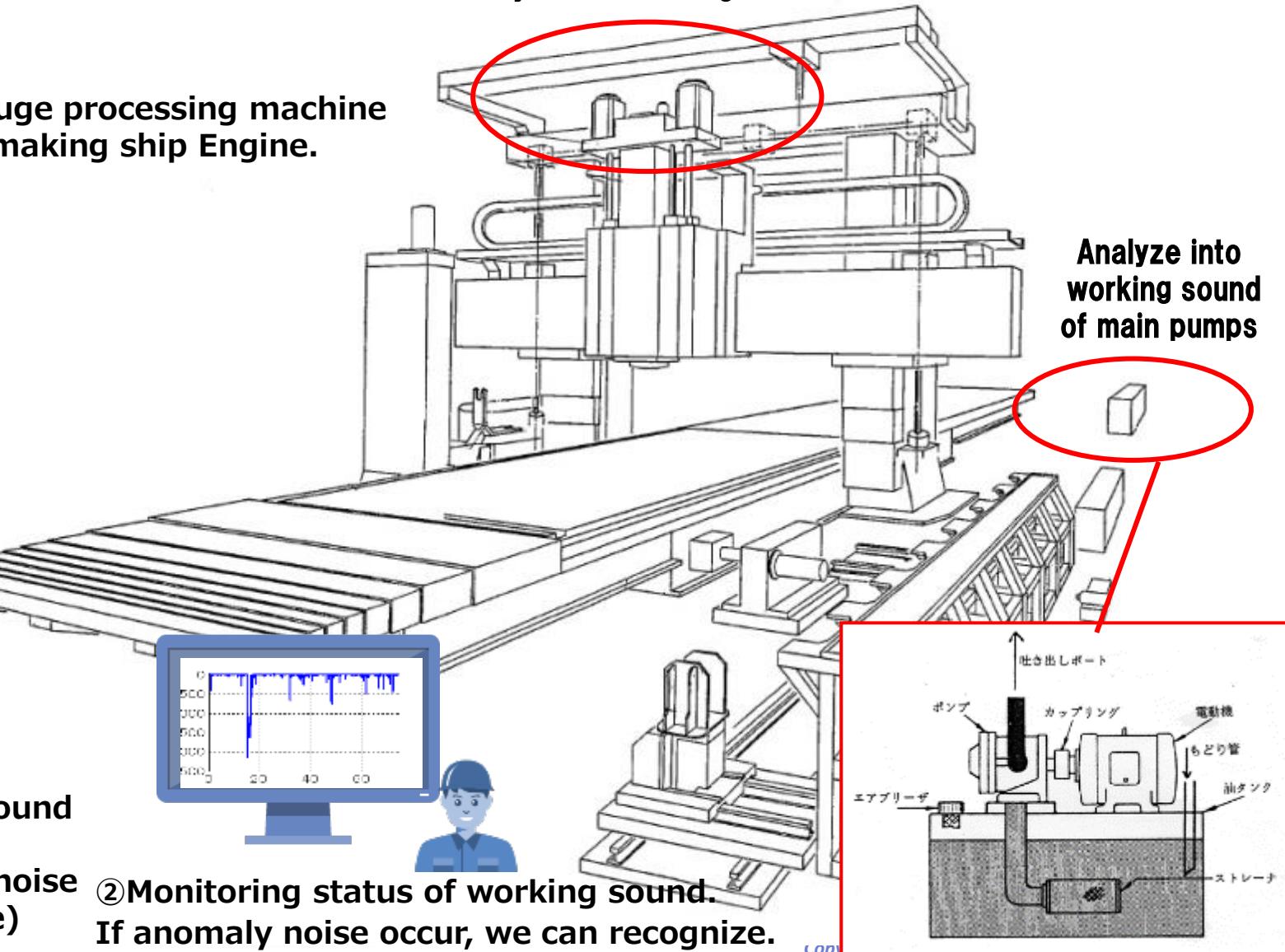
2. Case :

Predict Maintenance using Anomaly Noise Detection

This is Huge processing machine for making ship Engine.



Analyze into working sound of main motors



①Analyzing working sound of machine and detecting in anomaly noise (e.g.Collision noise)

②Monitoring status of working sound. If anomaly noise occur, we can recognize.

2. Case: <in detail>

Detections of Collision noise

- In factory working areas which sound several working noise, we can detect collision noise. Because of Noise Filtering Technology and Anomaly Noise Detection Algorism.

<timeline of working noise>



<Unusual score (result of detection)>

