Samitech

Intelligent Factory Solution

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Concept & Our Solution

1. Auto data connection for measure
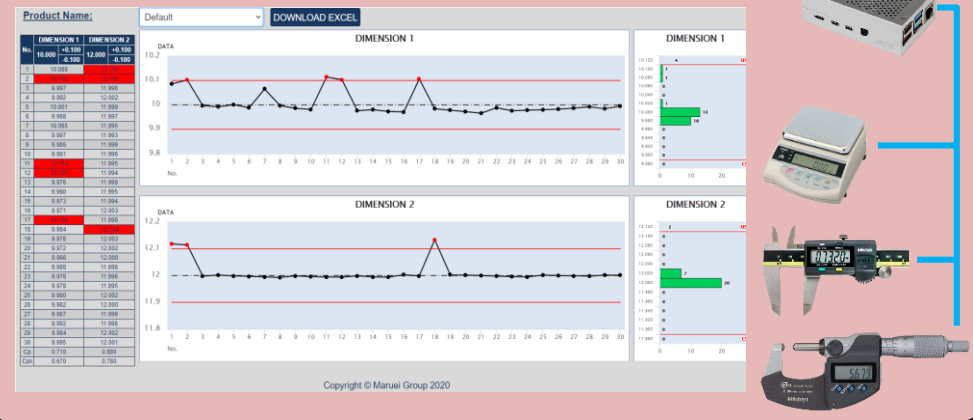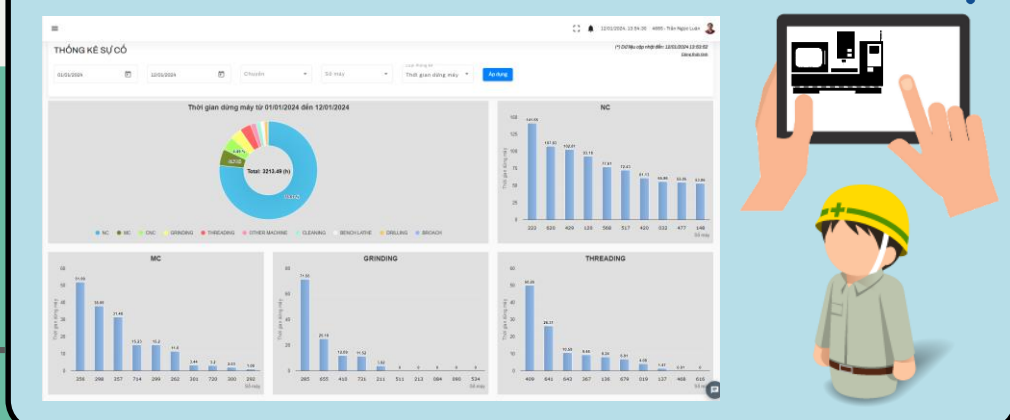
2. Machine OEE Dashboard
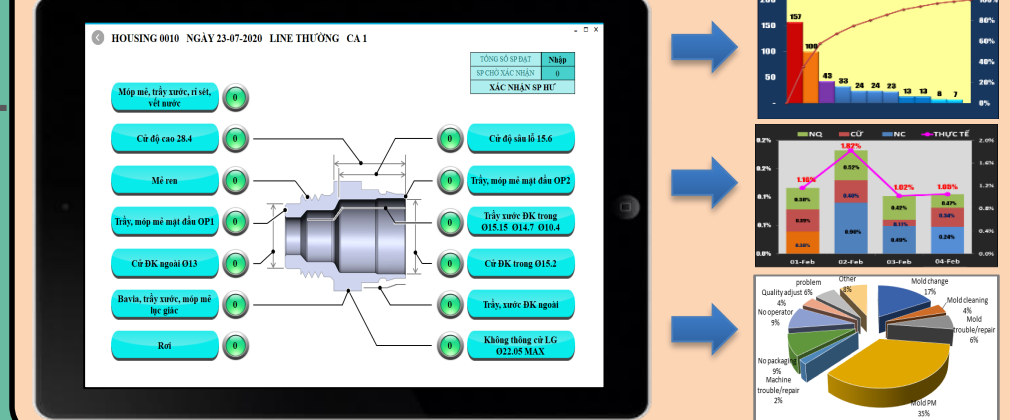
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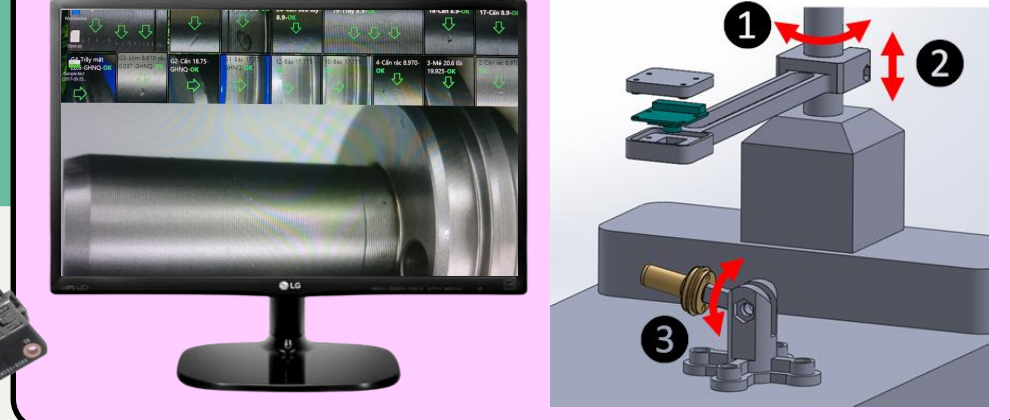
IoT Device can connect any kind of equipments

4. Maintainance Kakotora & Prevention
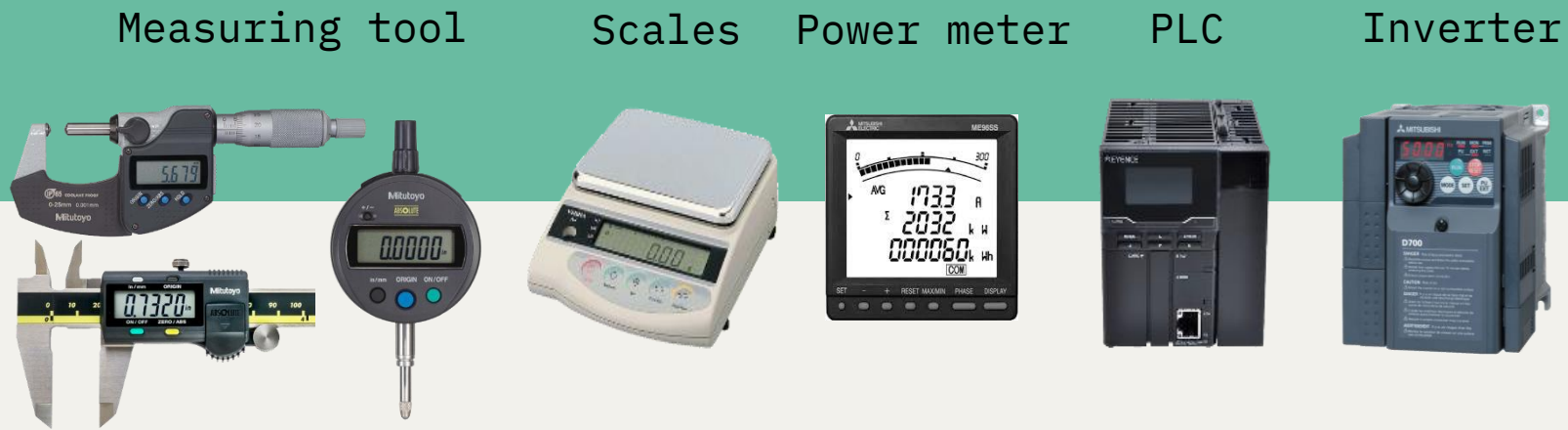
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6. Low cost camera for visual inspection

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1. Auto data connection for measure

▪ Device connection

Measuring tool   Scales   Power meter   PLC   Inverter

IM Measuring   Measuring microscope   CMM   Non-contact 3D measuring   Hardness testing

Profile meter   Roundness tester   Surface roughness tester   Torque tester   Resistance meter

Samitech IoT Device

▪ Applications

New Cpk measure request

DIGITALIZATION OF MEASUREMENT PROCESS:
- Automatic data collection from measuring instruments.
- Multiple devices can be connected simultaneously.
- Software designed according to user requirements.
- Data storage and processing on the cloud or local factory server.
- Data management with internet-connected devices.
- Paperless for all measurement processes, eliminates handwriting errors, saving up to 80% of manpower.

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1. Auto data connection for measure

- Actual Applications

1. Auto data connection for measure

▪ Actual Applications

A. Dashboard for auto input measure data (tablet)
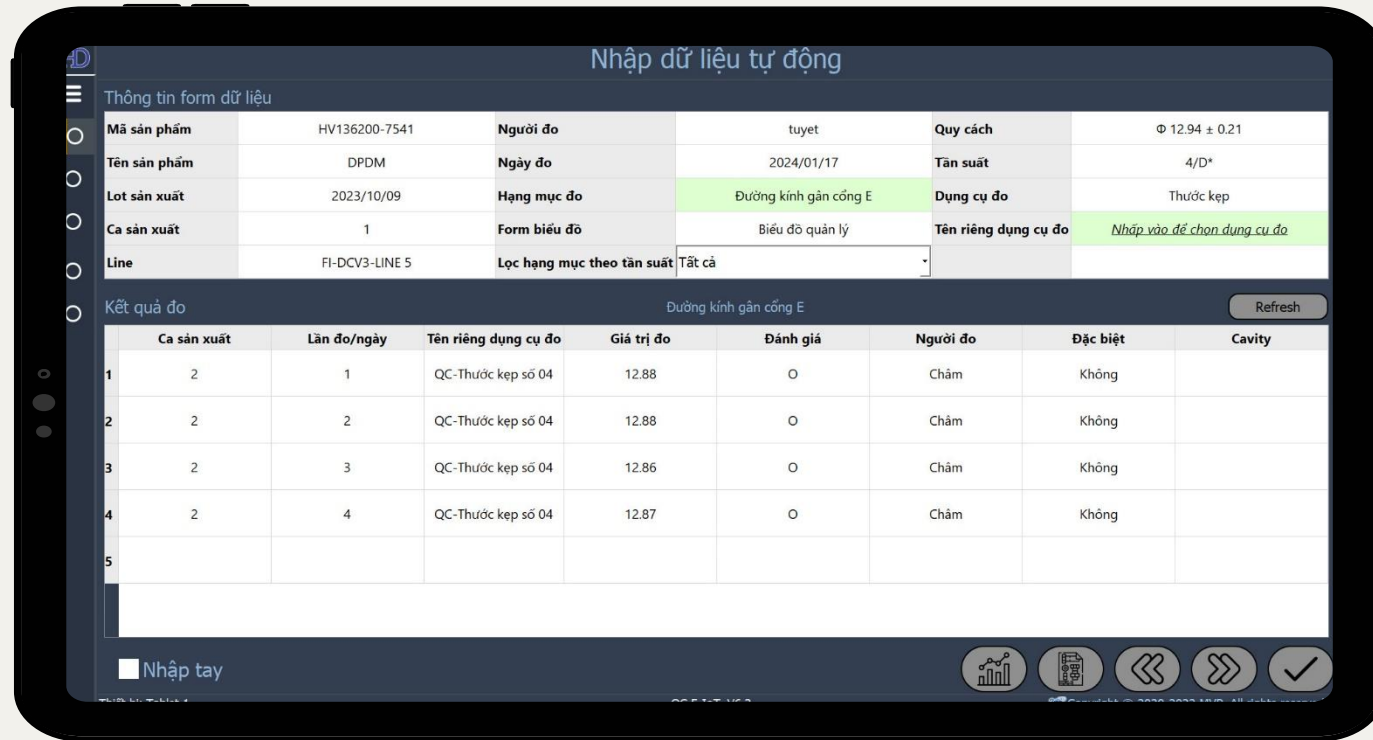
B. Actual control sheet that auto report to Manager to be appoved (web)

❶ Production registers a measurement request.

❷ QI/QA receives and measure the product

❸ IoT device reads measurement data from the measuring device

❹ Cloud system processes the measure data and show on dashboard

❺ Manager check and approve in webapp

❻ Feedback to Production, And update to database
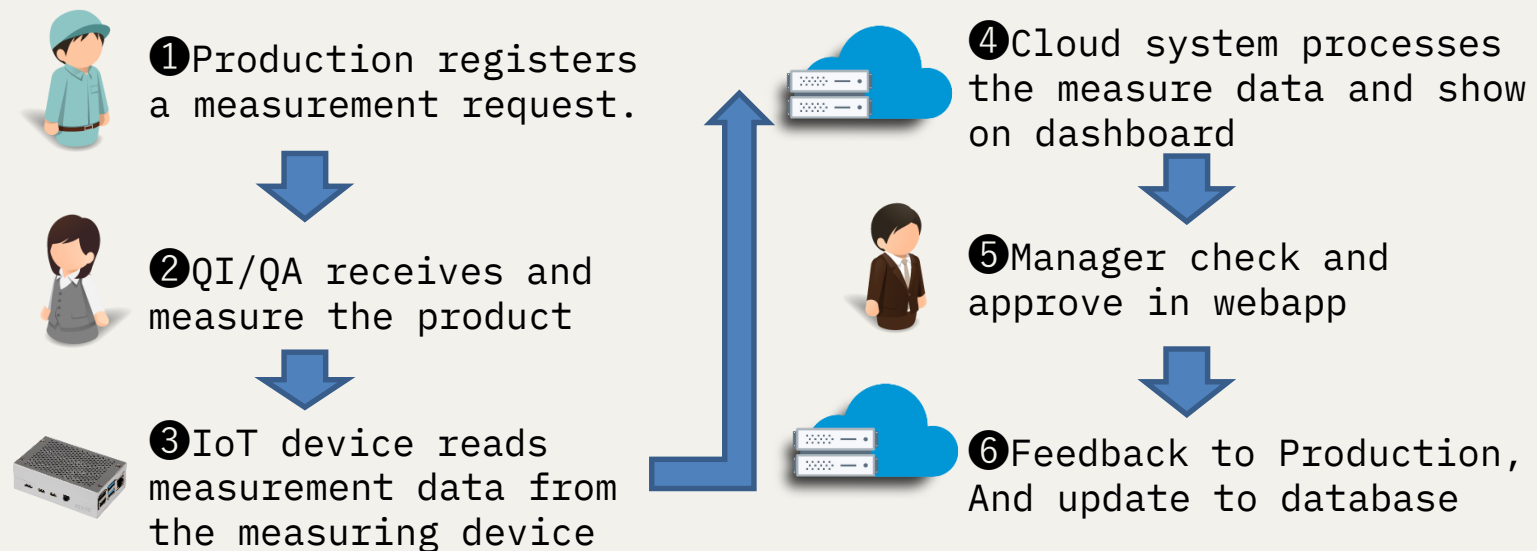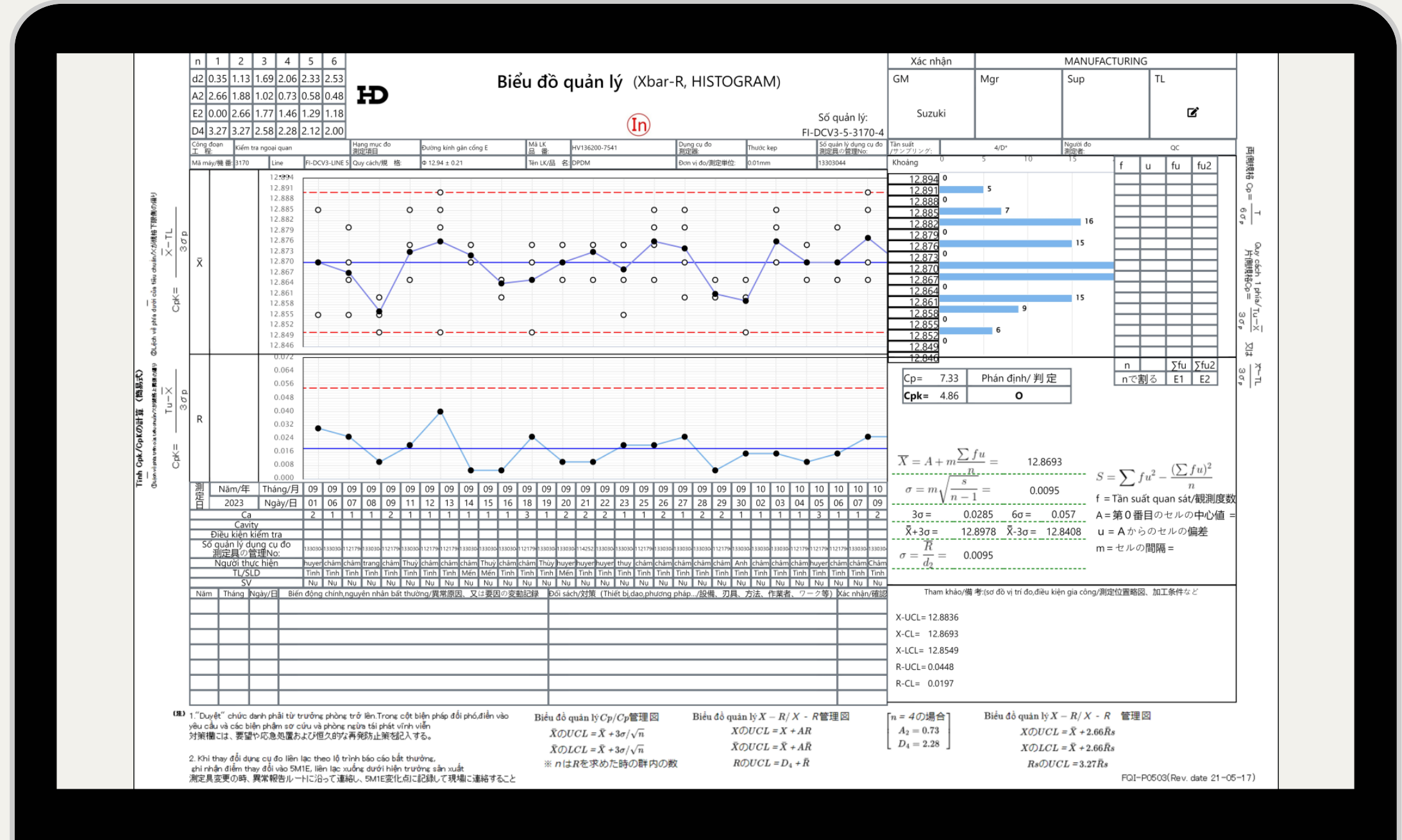
2. Energy Management IoT

- **Device connection**
- **Applications**

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IoT Device

Cabinet No.6
Abnormal
power using!!!

Năng lượng tiêu thụ theo ngày của tháng 12/2023
Năng lượng tiêu thụ theo giờ của ngày 28/12/2023
Năng lượng tiêu thụ theo nhóm của tháng 12/2023
Năng lượng tiêu thụ theo tháng của năm 2023

General Cabinet | Vice Cabinet | Cabinet 1 | Cabinet 2 | Cabinet 3 | Cabinet 4 | Cabinet 5 | Cabinet 6 | Cabinet 7 | Cabinet 8
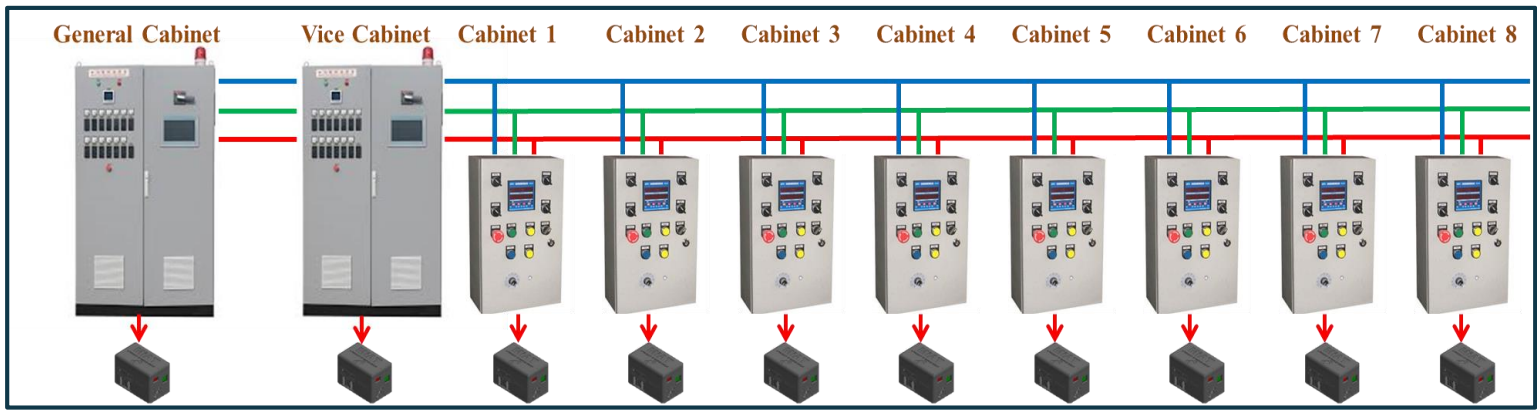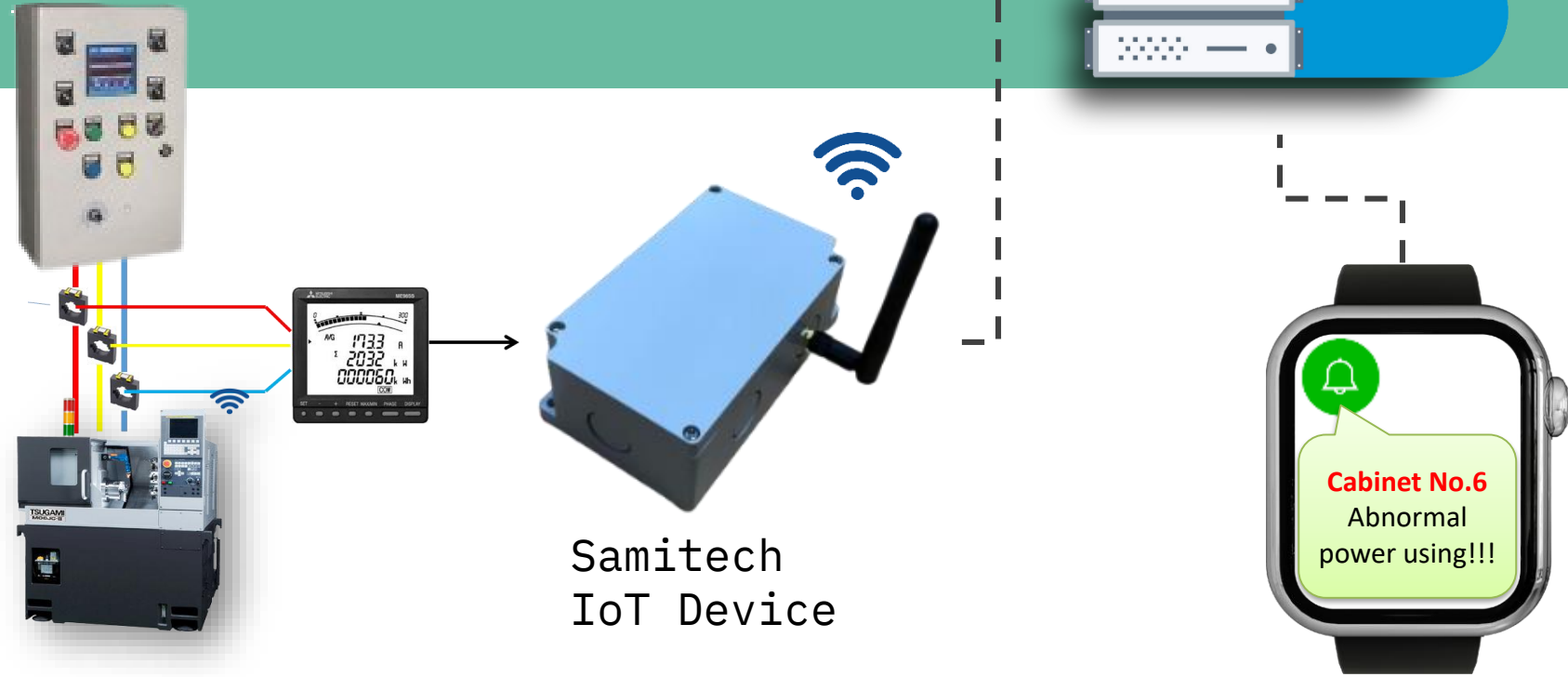
ENERGY MANAGEMENT by IoT:
- Monitoring energy usage, downloading Excel forms for ISO
  compliance
- Forecasting energy costs
- Improving energy efficiency
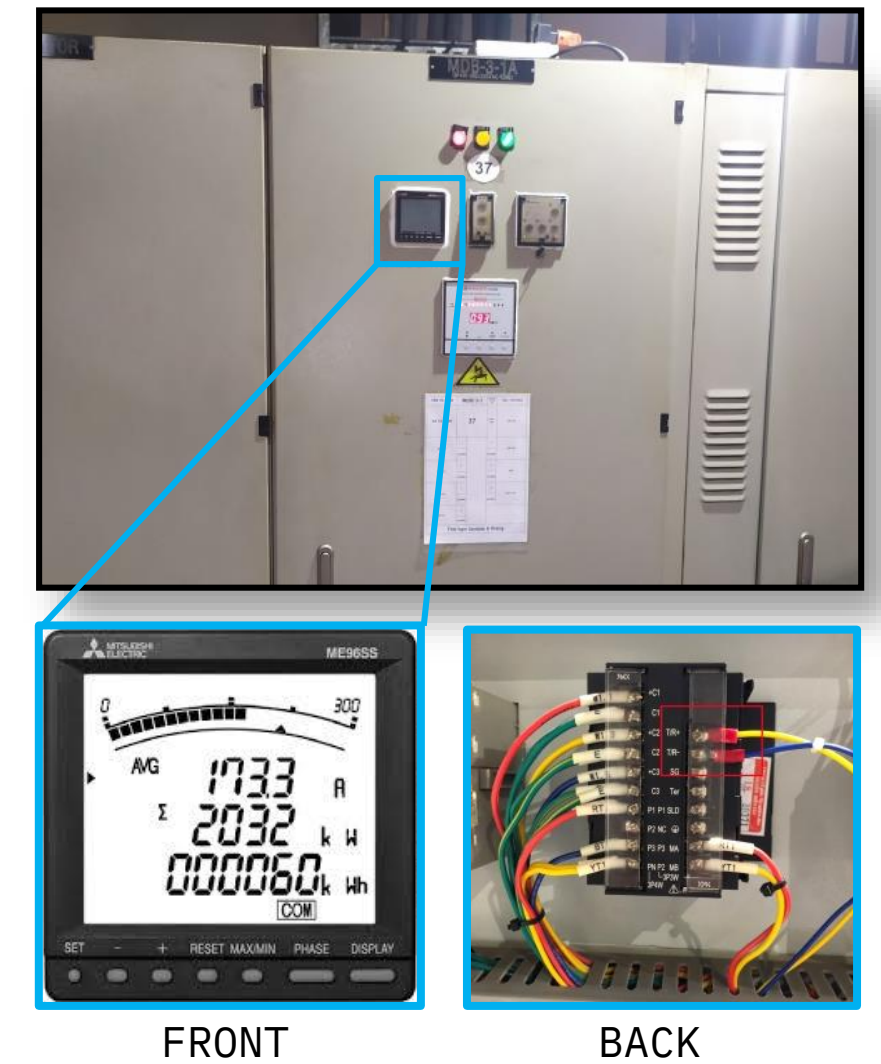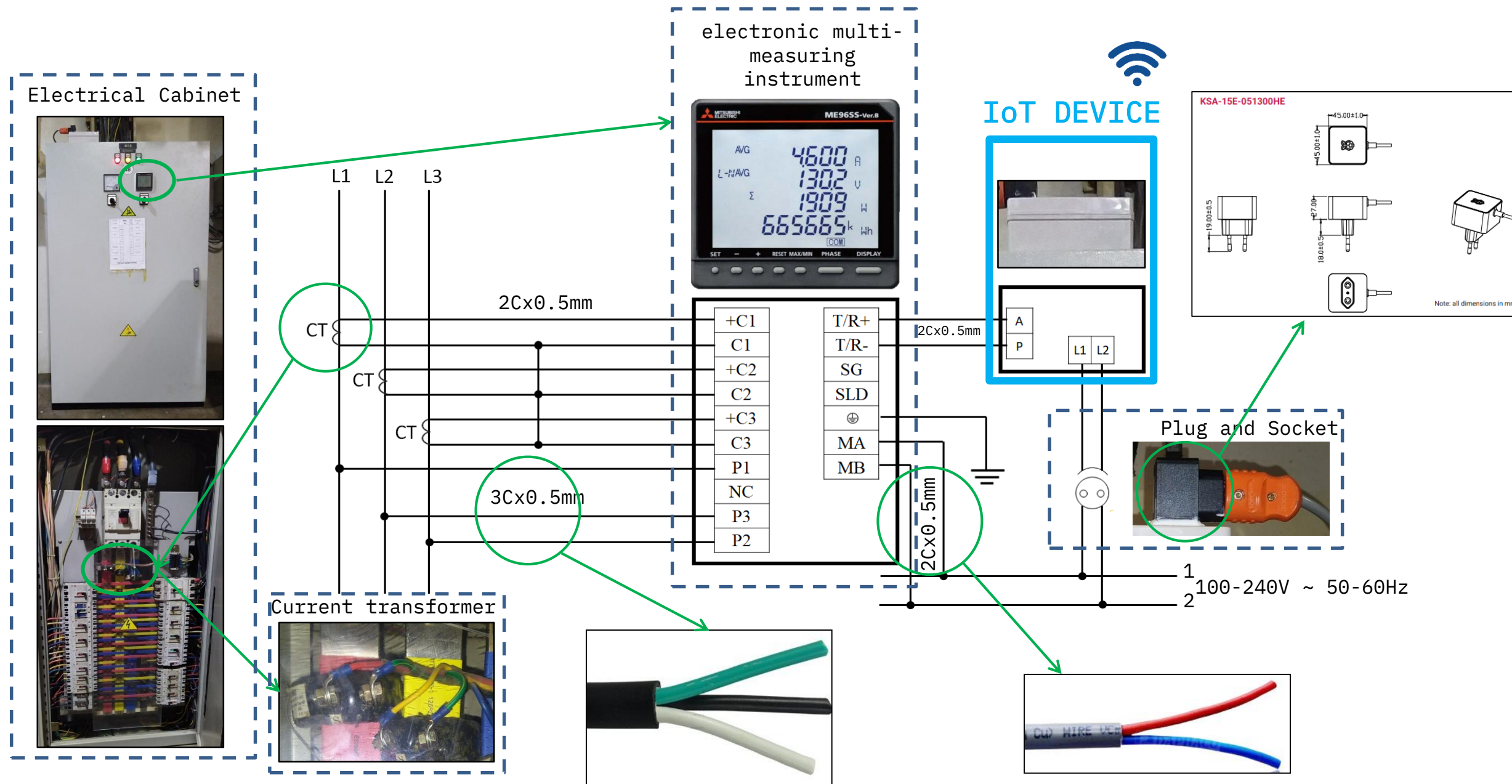- Detecting abnormal power usage

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- Actual installation

Electrical Cabinet

electronic multi-measuring instrument

ME96SS-Ver.B

IoT DEVICE

KSA-15E-051300HE

Note: all dimensions in mm

L1 L2 L3

2Cx0.5mm

+C1	T/R+	A
C1	T/R-	P
+C2	SG	L1 L2
C2	SLD	
+C3	⊕	
C3	MA	
P1	MB	
NC		
P3		
P2		

2Cx0.5mm

CT

CT

CT

3Cx0.5mm

2Cx0.5mm

Current transformer

Plug and Socket

1
2 100-240V ~ 50-60Hz

FRONT

BACK

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3. Machine OEE Dashboard

▪ **Device connection** ▪ **Applications**

LAN or Wi-Fi

LỆNH SẢN XUẤT

QRCode Data

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Ethernet, TCP IP, MTConnect,…

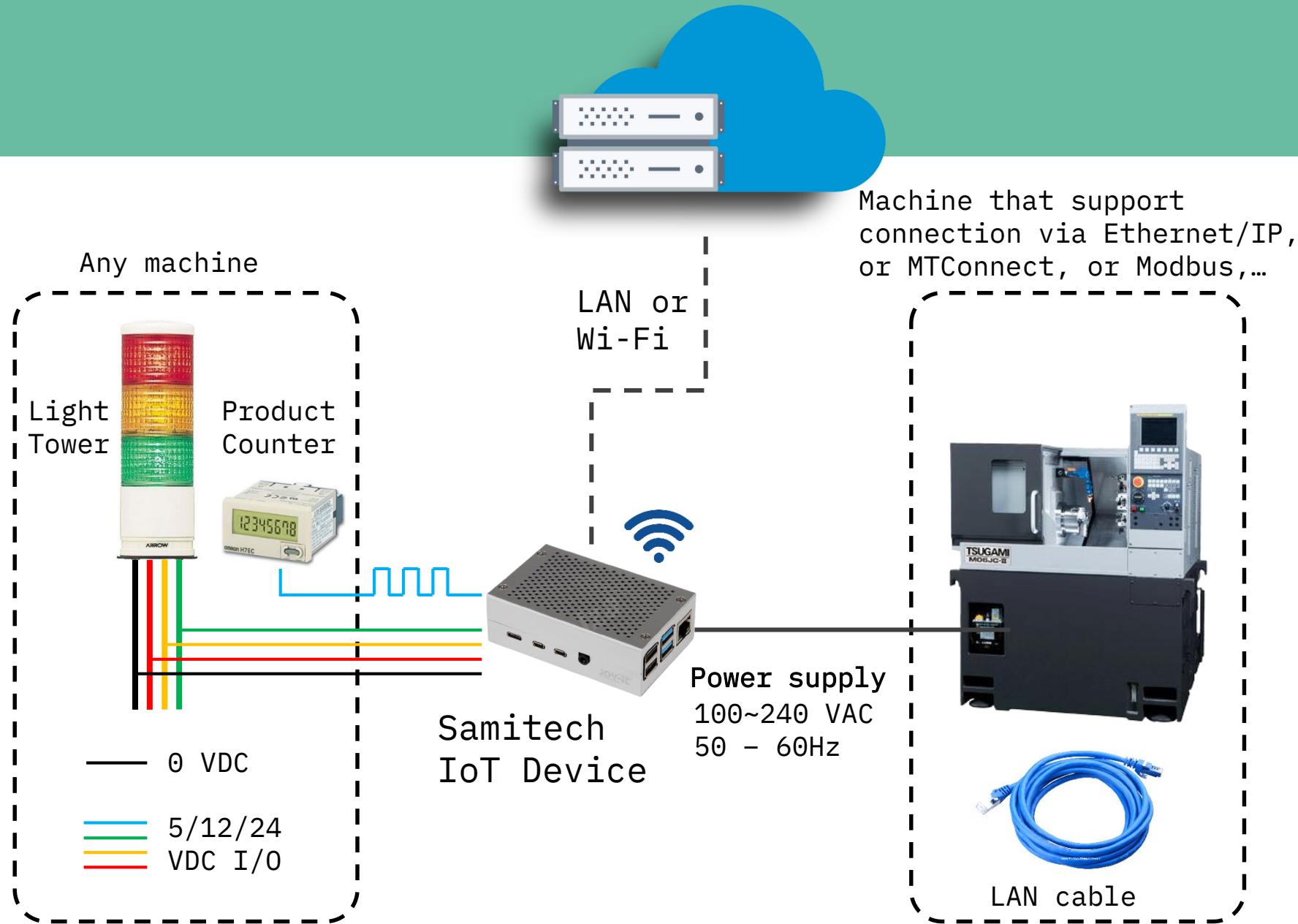24VDC I/O signals

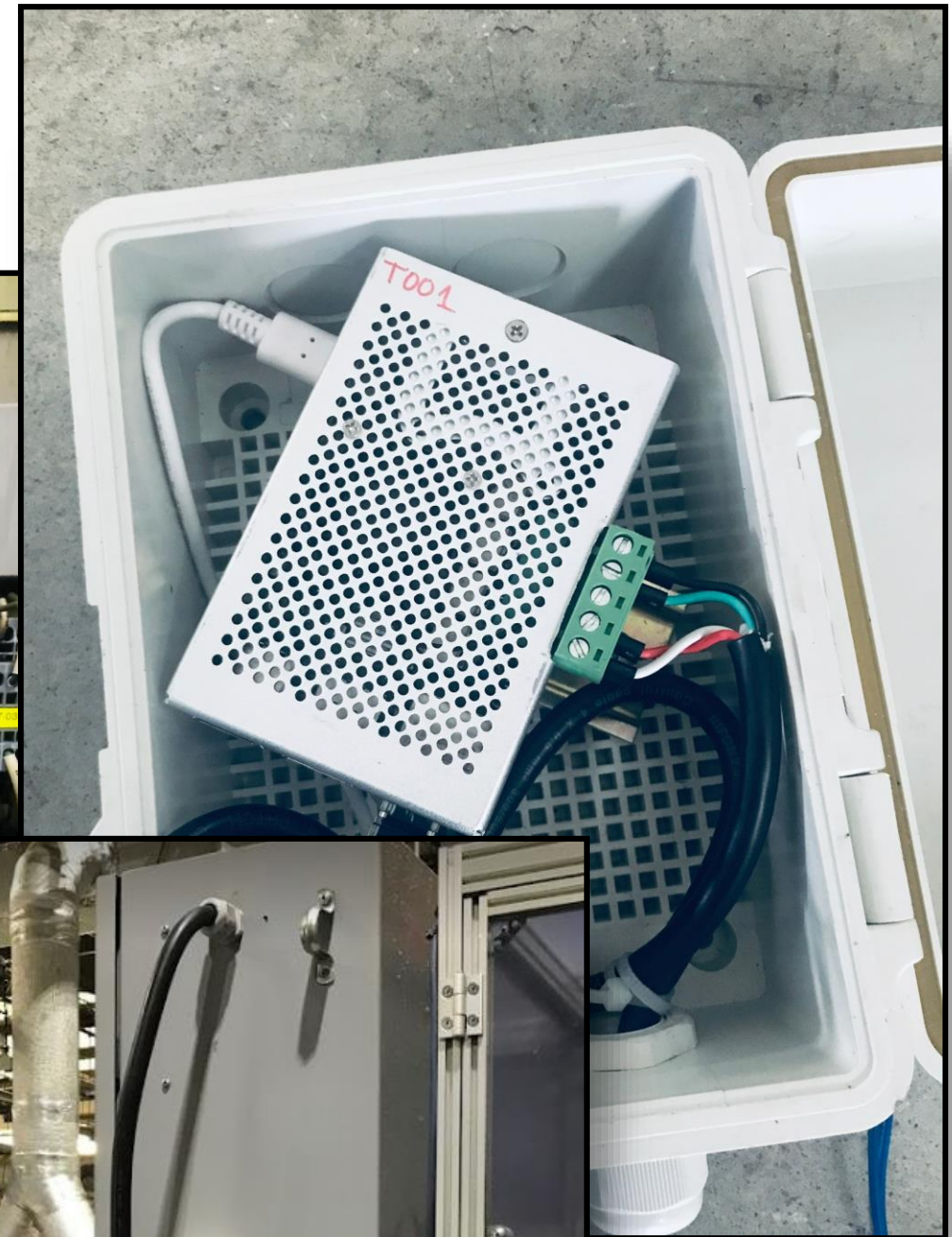Manual input (NG, Downtime,...)
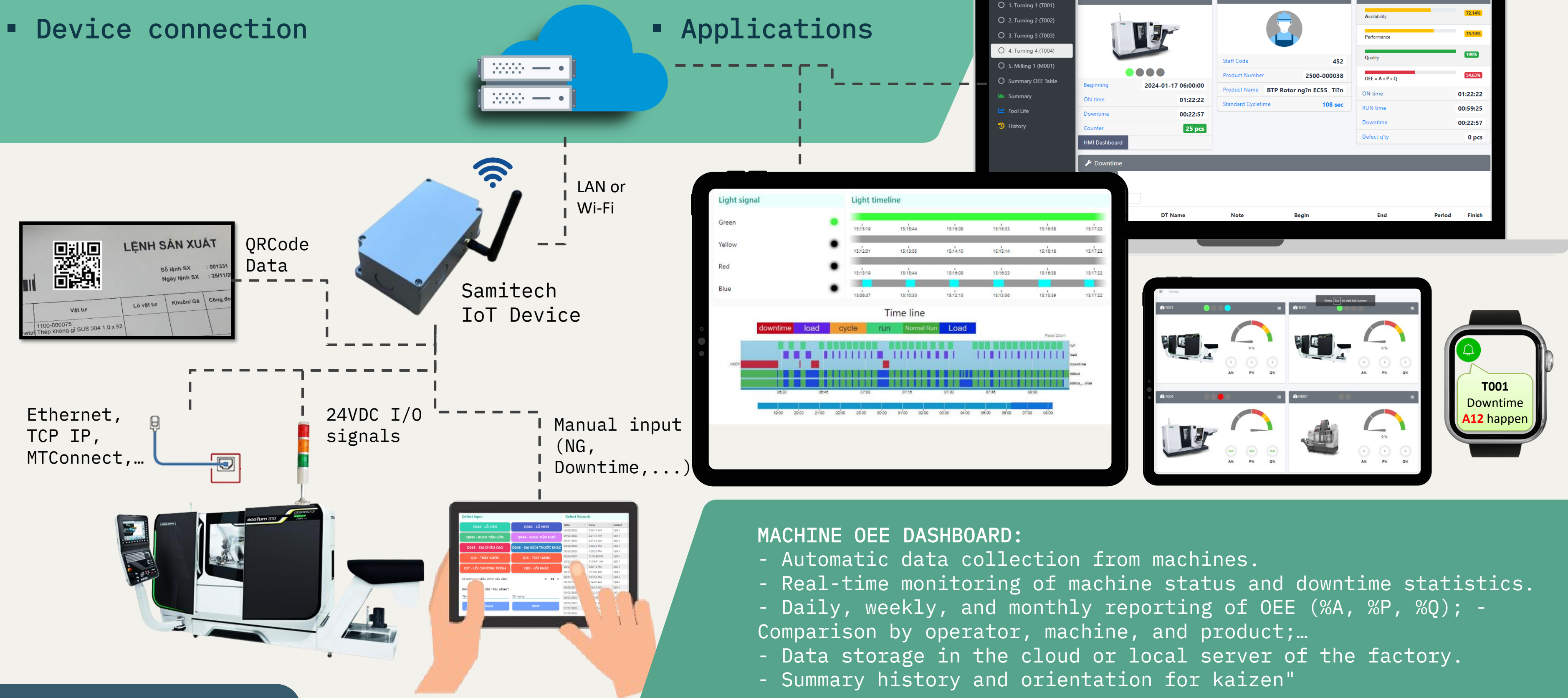
MACHINE OEE DASHBOARD:
- Automatic data collection from machines.
- Real-time monitoring of machine status and downtime statistics.
- Daily, weekly, and monthly reporting of OEE (%A, %P, %Q); - Comparison by operator, machine, and product;…
- Data storage in the cloud or local server of the factory.
- Summary history and orientation for kaizen"

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3. Machine OEE Dashboard

- Actual installation

Any machine

Light Tower

Product Counter

— 0 VDC

— 5/12/24 VDC I/O

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LAN or Wi-Fi

Machine that support connection via Ethernet/IP, or MTConnect, or Modbus,…

Power supply 100~240 VAC 50 – 60Hz

LAN cable

Method 1: Inside Cabinet

Method 2: Outside Cabinet (with oil-prenvent cover)

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3. Machine OEE Dashboard

- Actual examples of Dashboard

OEE Overall Sumary

Output Summary

Downtime Summary

Running & Downtime

Pareto of Downtime

Performance by Time

Cycletime tendency

Performance by Employee
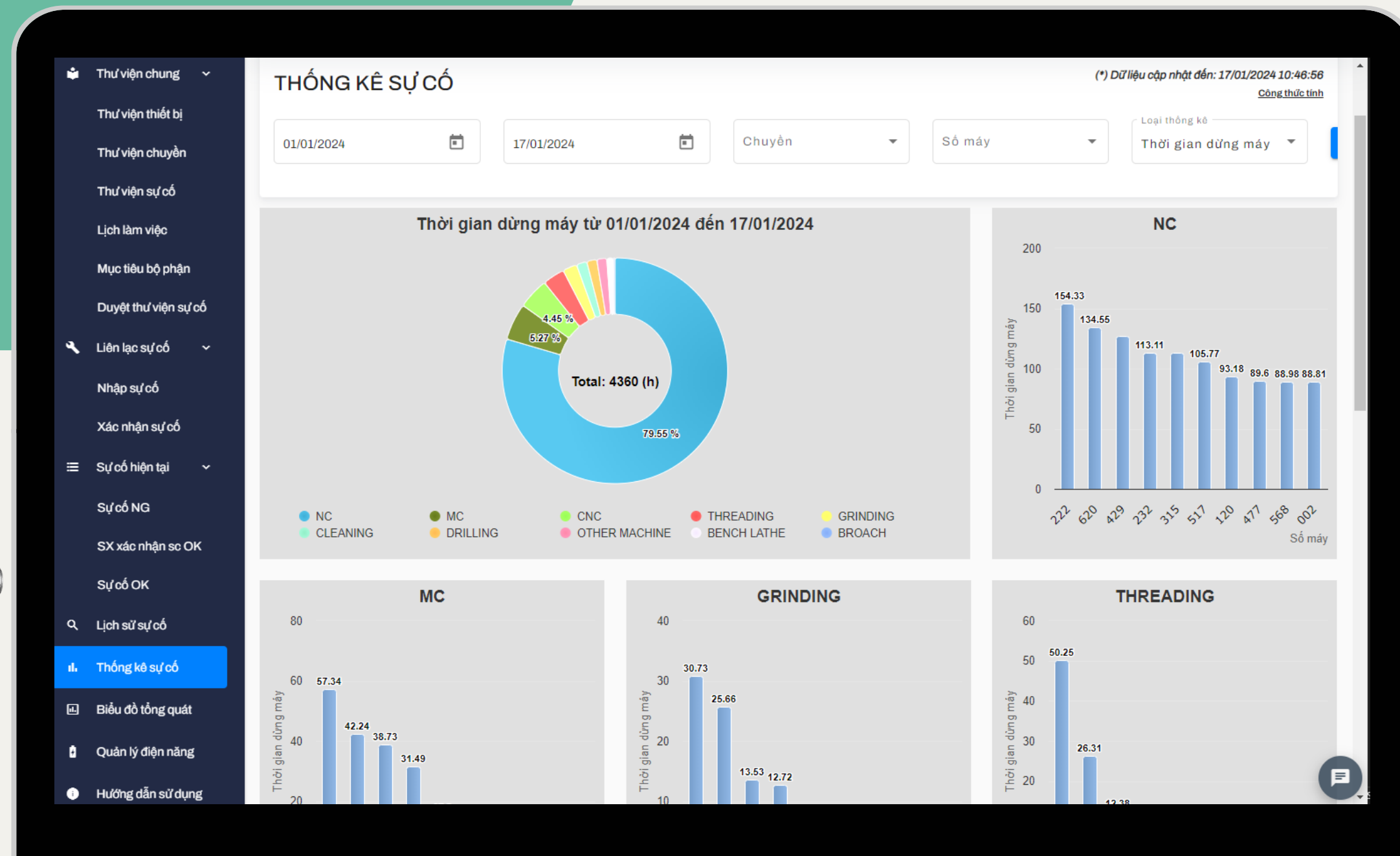
Quality by Time

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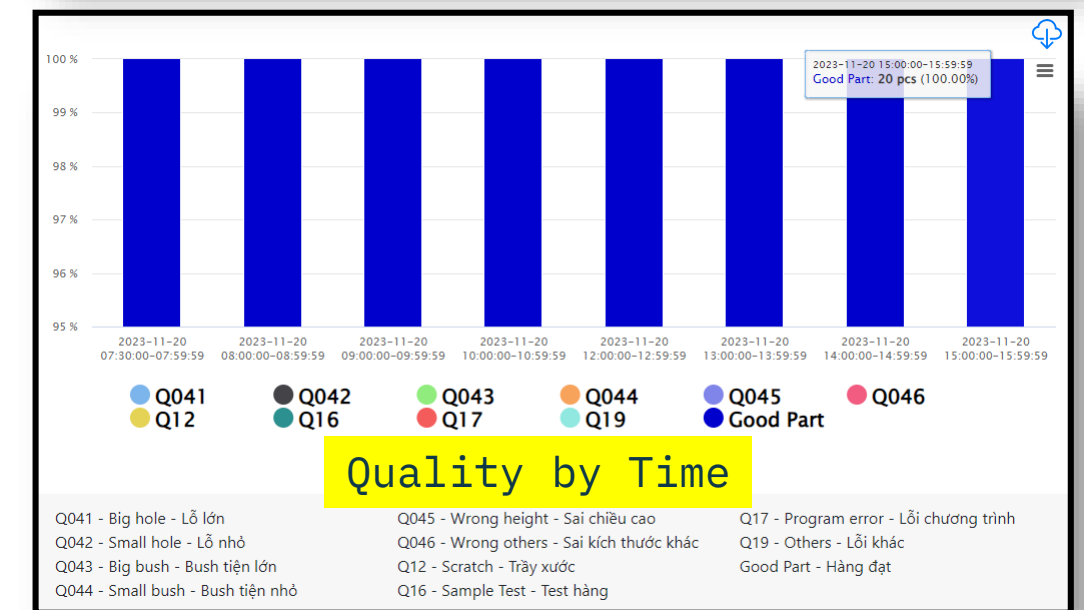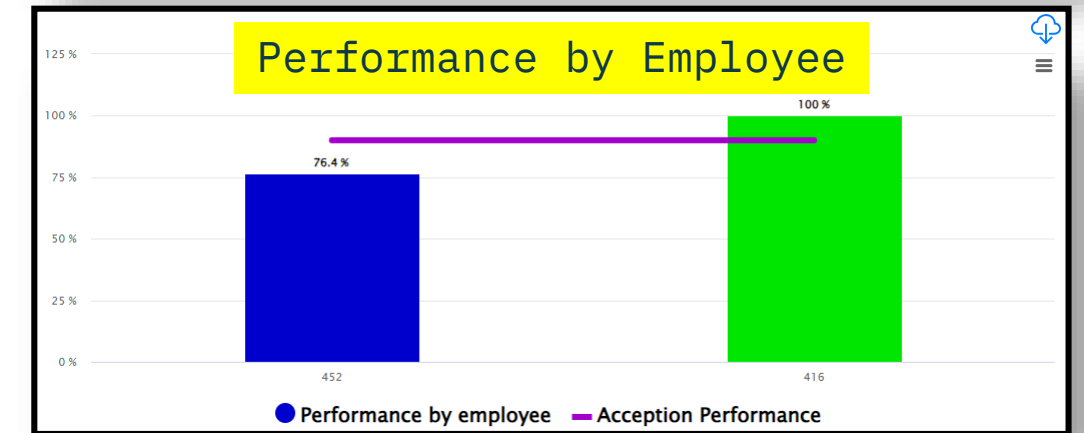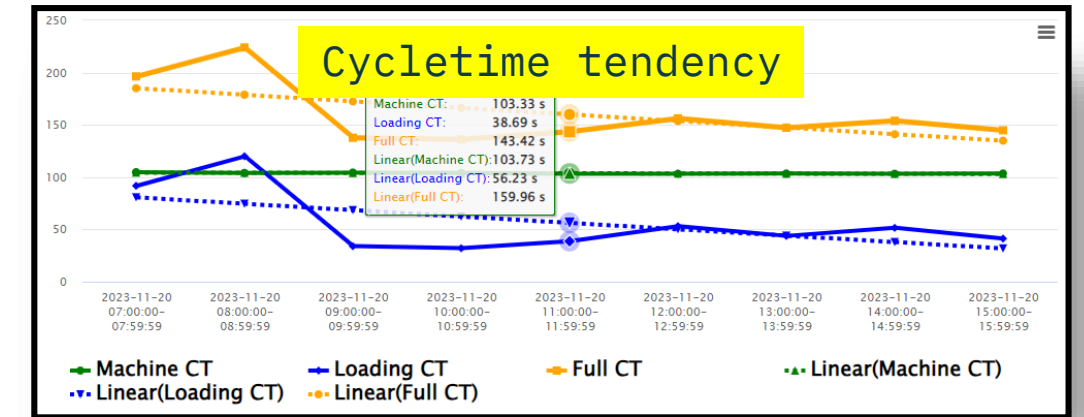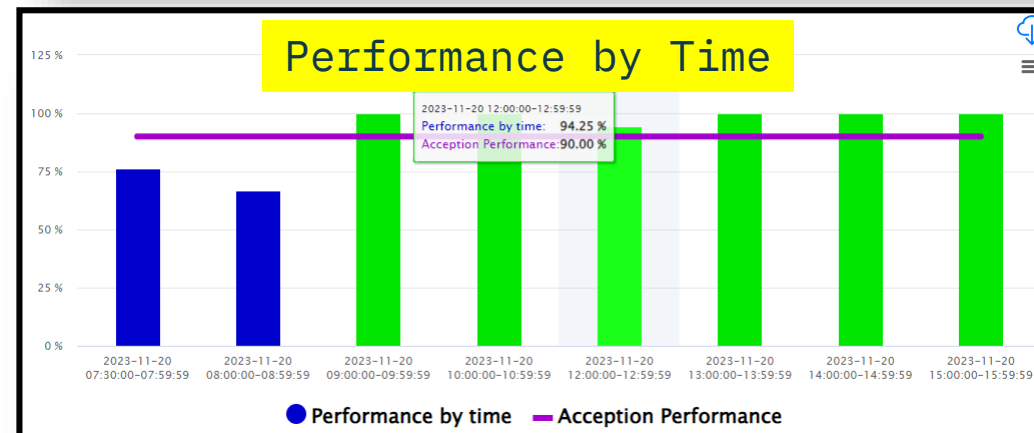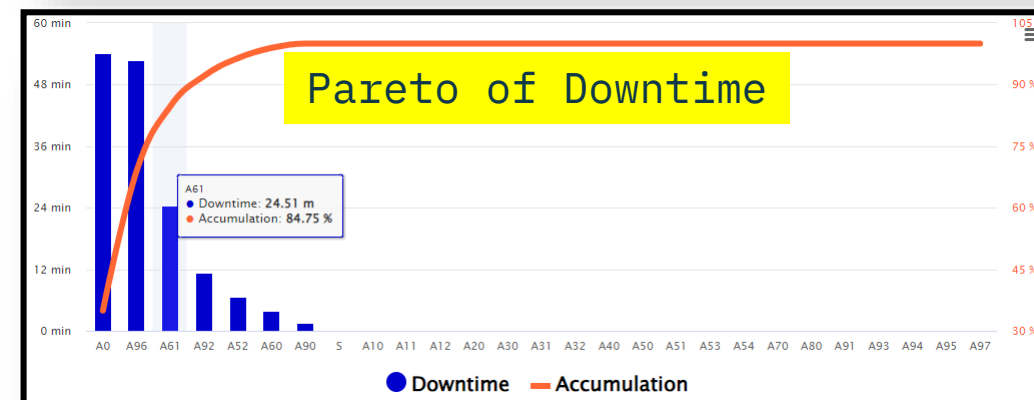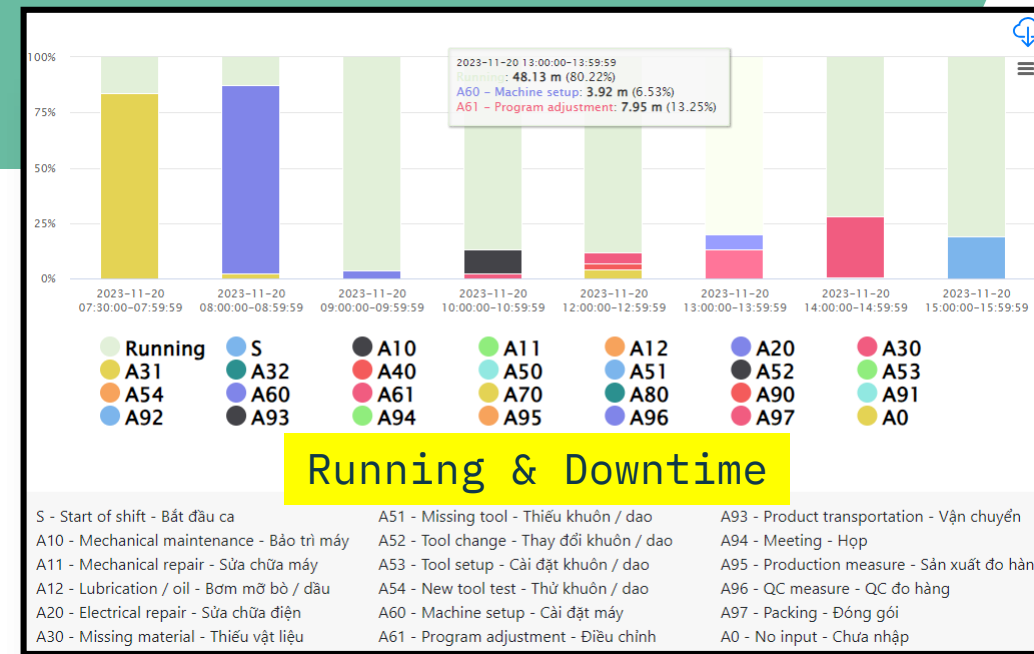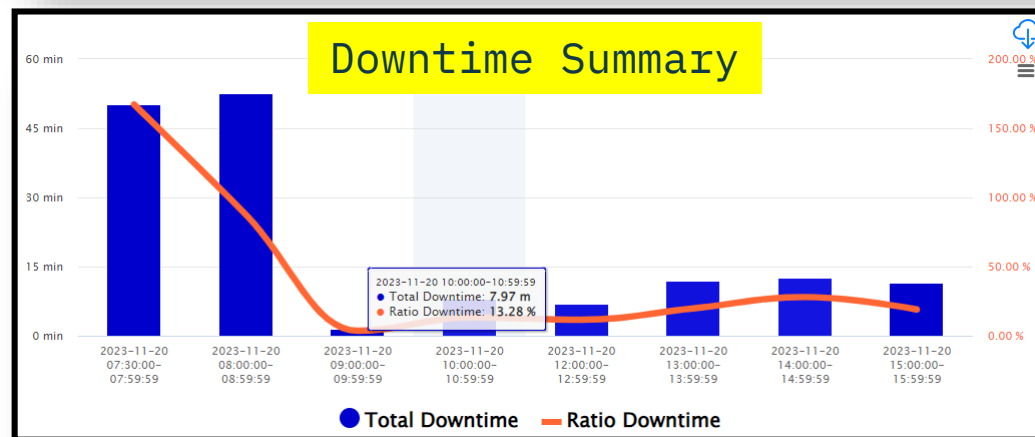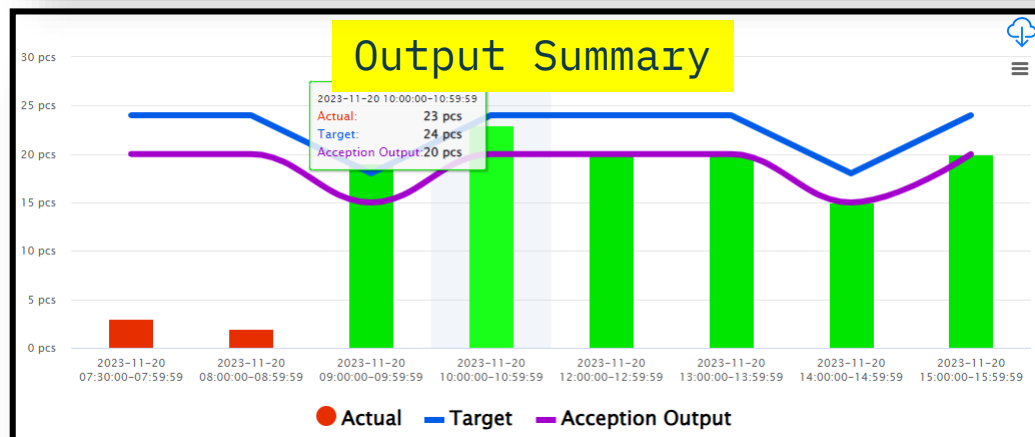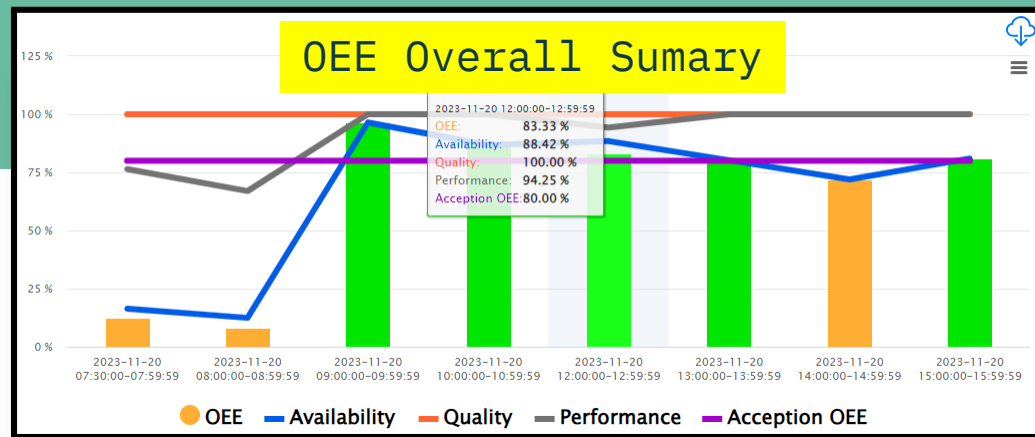
4. Maintainance Kakotora

- **Applications**

- Using kakotora library to repair machine,
- Then update the result details to library after Done!

KAKOTORA MANAGEMENT:
- The Kakotora library contains records of all historical troubles (problem descriptions, root cause analysis, detailed solution steps).
- The Kakotora will be updated whenever a new problems comes.
- So that, new employees can refer to this Kakotora library and can takes their learning.
- Also, in case of a repeat problems, they quickly know what to check and action.
- Statistical reports of all downtime are provided on a daily, weekly, and monthly basis; Comparisons are made by machine, product, and staff.

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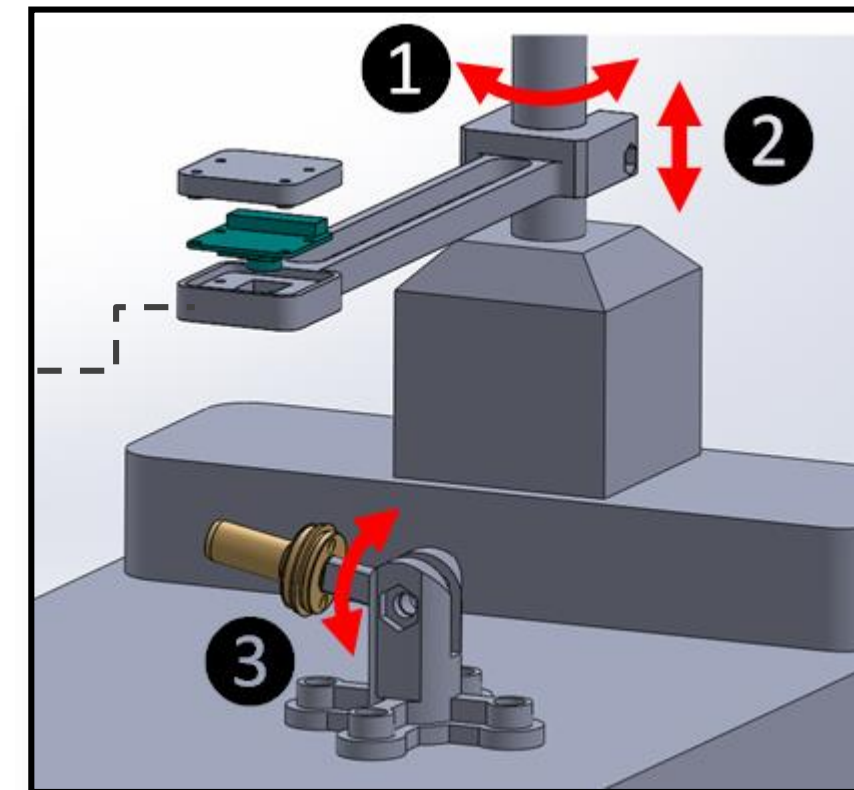# 5. Low cost camera for visual inspection

▪ Actual installation
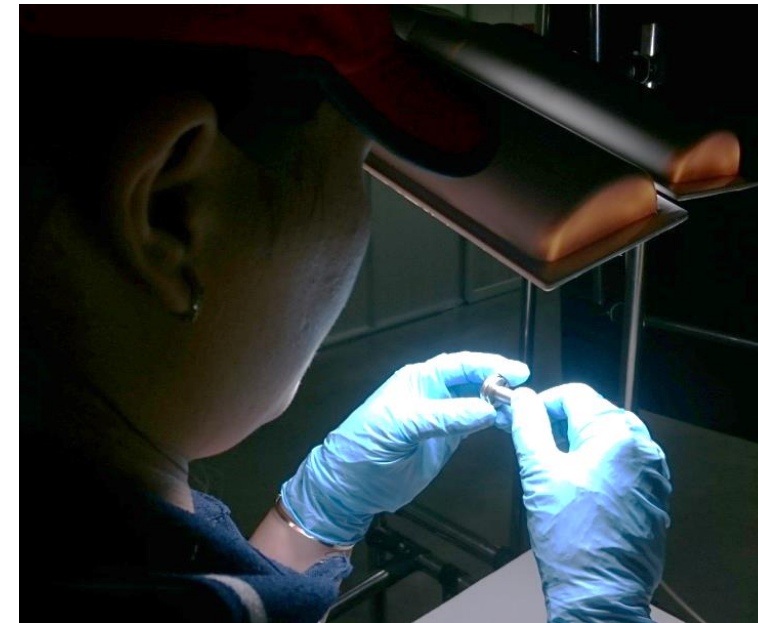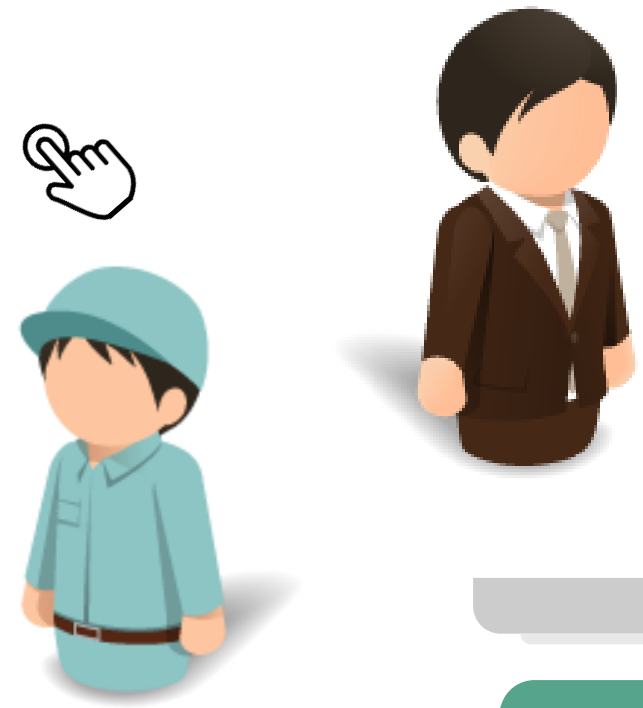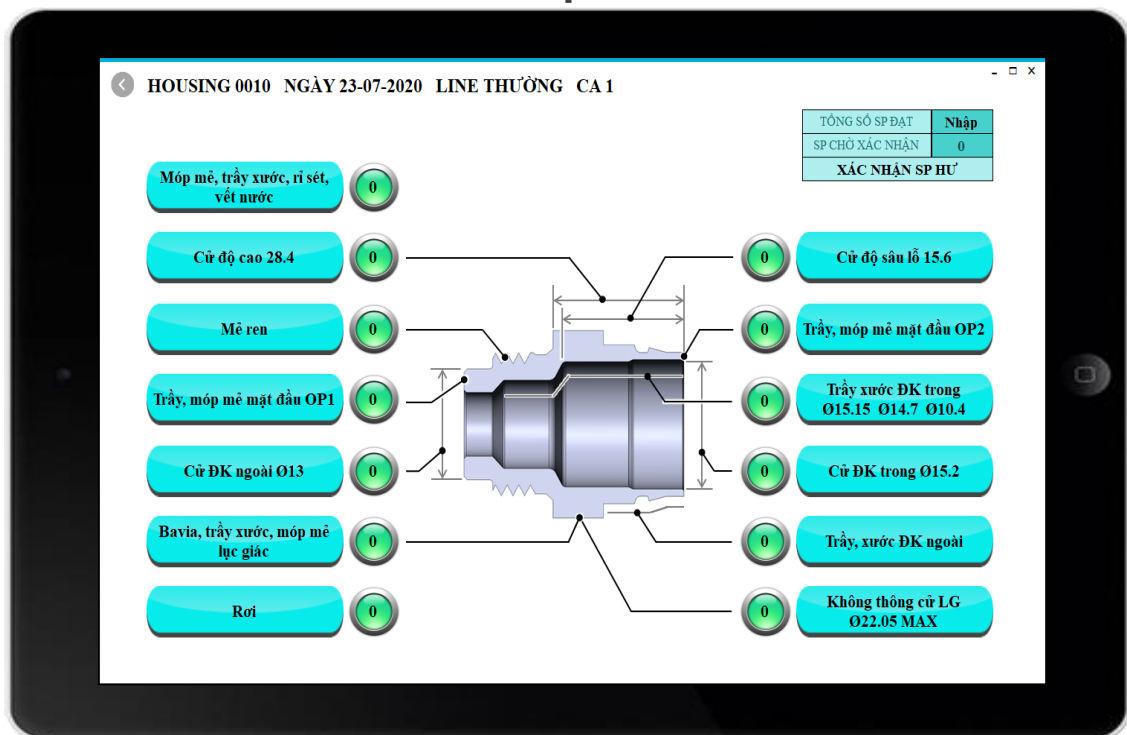

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IoT Device

BEFORE
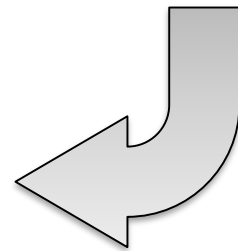
AFTER

Low cost camera for visual inspection:
- Instead of checking small products directly with the naked eye, we check the product
  image on a monitor with 15x zoom. This allows workers to easily identify visual defects.
- This method is very simple to set up and requires very low cost.

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6. Paperless statistics input

- **Applications**

ALL KINDS of
PRODUCTION DATA will
be store in CLOUD

Paperless statistics:
- Effectiveness: Digitization of data, completely eliminating the
  need for paper.
- Application: Tracking production output, percentage of
  defective products, inspection equipment, ...
- All data can be easily accessed, downloaded in Excel format,
  automatically summarized in reports, with orientation for
  kaizen and forecasting of critical problems.

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Our Customers

HD HAMADEN VIETNAM

DENSO

KURABE

MARUEI Industries Co.,ltd.

MVP

Fischer ASIA CO.,LTD
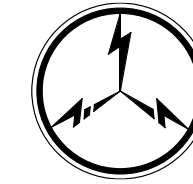
NVN
NIIMI VIỆT NAM

TOYOTA TSUSHO

TYOptics Thailand

- Our team has extensive experience in surveying and implementing projects for numerous FDI enterprises, with a particular focus on companies within the automotive supply chain. The list above showcases some of the typical customers for whom we have provided solutions.

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Our Partners

- In addition to the systems, software, and applications designed by our team, the hardware devices used to connect and deploy projects are carefully selected by us from reputable manufacturers. The list above showcases some of the typical hardware brands that we have collaborated with and utilized in real projects.

Our team

Ngoc Luan
Bussiness Owner

Cong Tam
Project Manager

Thanh Thuan
IoT Expert

Viet Cuong
IoT Engineer

Van Khanh
IoT Engineer

Our team

Minh Thanh
IT Expert

Duy Khang
Developer

Hoang Son
Developer

Uyen Thi
Developer

Yen Nhan
Marketing Manager

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Thank You

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