

MFEC

*STAY **FAST** AND **ADAPTIVE***

IDA100 Project Digital Transformation

MFEC

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AGENDA

- 01 We are MFEC
- 02 IIOT Experience and Successes case
- 03 IDA100 Project nowadays
- 04 Why MFEC IIOT

1. We are MFEC

Our story



1997

Established,
official distributor of SUN,
Netscape, Cisco

2003

1st July 2003 - Listed on SET, 

2004

Had 3 subsidiaries :
Prompt Now, AIM, 4Bizinet



2005 - 2006

Acquired : MIS, MISO, and Skybliz,
An IT solution provider
MFEC IP Thai RuleSet,



2014



Major shareholder by TIS

2017

Expands work area with *new office*
Had 4 subsidiaries company



2018

MFEC Transformation,
set new vision & mission

Build Venture Builder team Had mSyne
as subsidiary company



2020

Had Venture Lab
As subsidiary company



2021

Despite COVID-19 situation, we improved
in all aspects of technology for more
impact on quality of life

2022

We were technology-driven enterprise
which utilized ultimate potentials and
opportunities amidst crisis to uplifts
people's digital life.

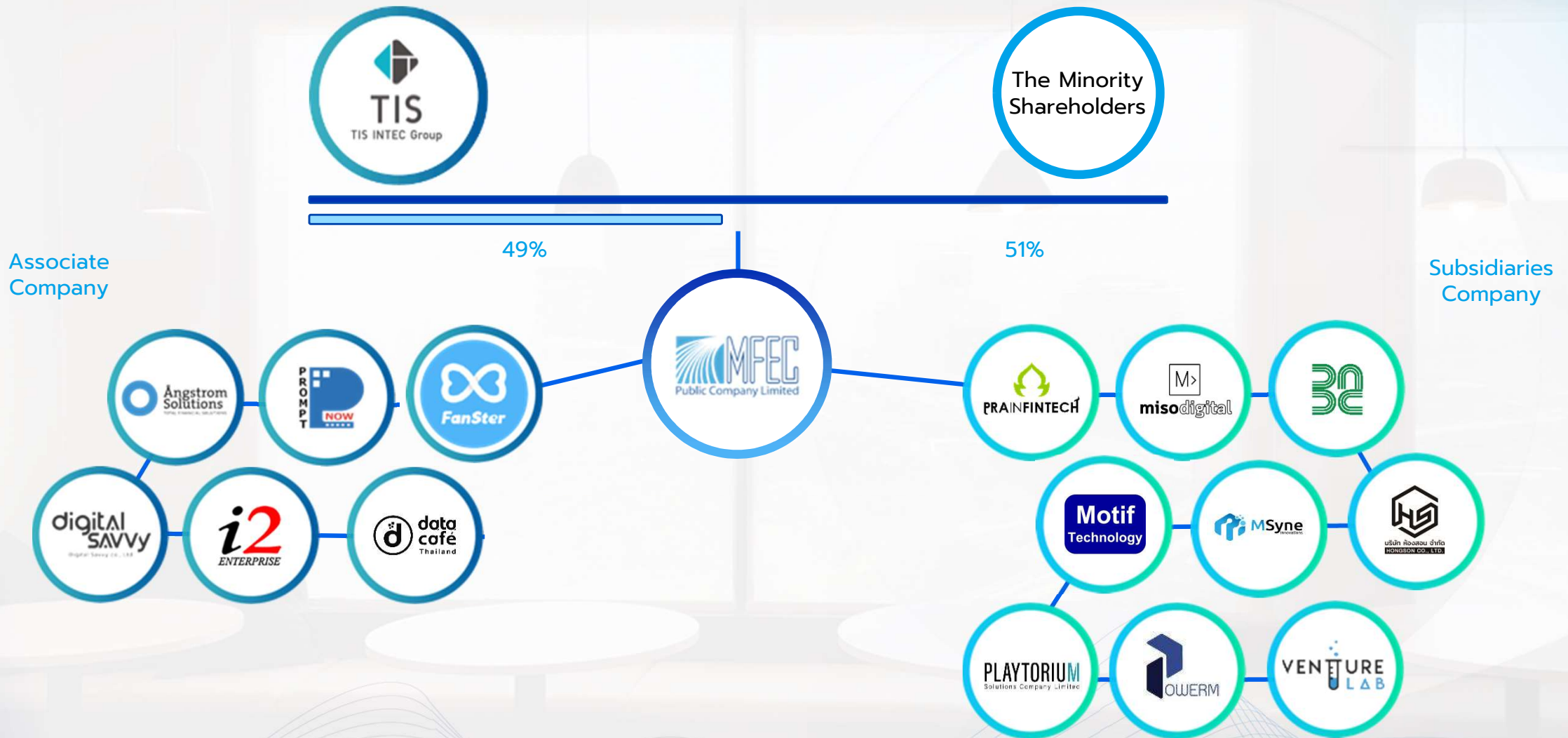
2023

We aim to create *premium technology*
to achieve sustainability where no one
will be left behind.

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MFEC Group Collaboration



Who we are



1,200+
Employees



Expertise from
400+
leading brands
certified



80%
of clients
in the listed
company



68M+
users
over 68 millions users
use MFEC services



Partner of
90
global leading
tech-brand

MFEC is full of creativity and determination for endless self-development.

We aim to create state-of-the-art technology and innovations that improve everyone's lives.

We are surrounded by up-to-date tools in this trendy digital environment and atmosphere that will always keep your passion alive.

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What we do

MFEC's Workflow

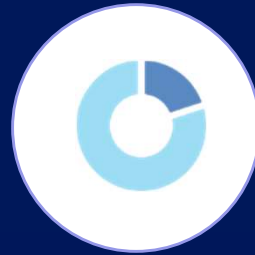
Gathering Requirements

Solution Consult

Solution Discussion

Confirm Final Solution

Big Data & Analytics



Business Solution



Cloud Platform



Business Services Management



System Infrastructure



Marketing Technology



Cyber Security



IoT & Smart X Innovation



2. IIOT Experience and Success case

Outcome record

12 Factories

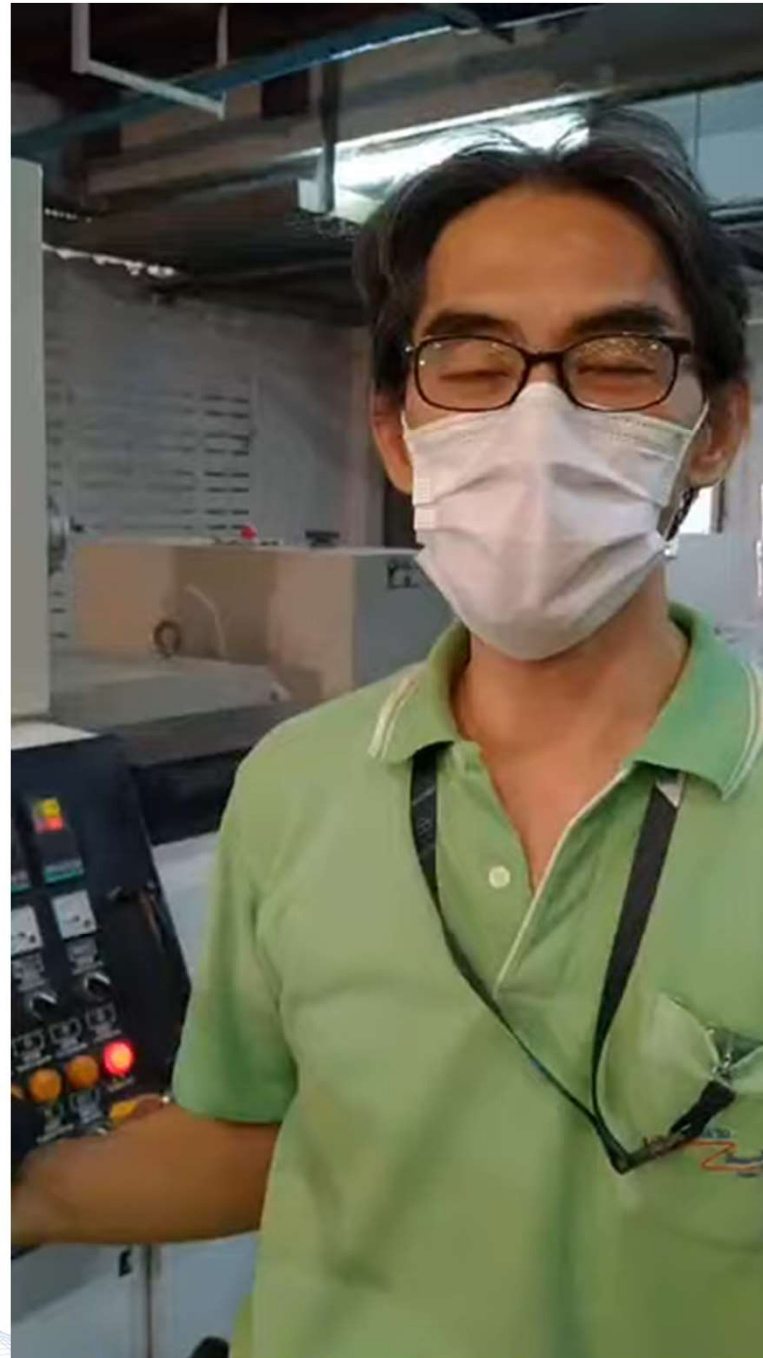
- Injection
- Extrusion
- Thermoforming
- Blow film
- Calendaring



Productivity growth average 14.58%

การให้คำปรึกษาแนะนำเพื่อการเพิ่มประสิทธิภาพในสถานประกอบการ ร่วมกับการประยุกต์ใช้ระบบ Internet of Things ทั้ง 12 สถานประกอบการ มีสัดส่วนการเพิ่มขึ้นของประสิทธิภาพเพิ่มขึ้นไม่น้อยกว่าร้อยละ 10 เป็นจำนวน 10 ราย คิดเป็นร้อยละ 83.33 ของจำนวนสถานประกอบการที่เข้าร่วมโครงการ โดยมีค่าเฉลี่ยการเพิ่มขึ้นของประสิทธิภาพอยู่ที่ 14.58 % และมีมูลค่าทางเศรษฐกิจรวมที่เกิดขึ้นจากการดำเนินโครงการรวมทั้งสิ้น 20,178,116.56 บาท

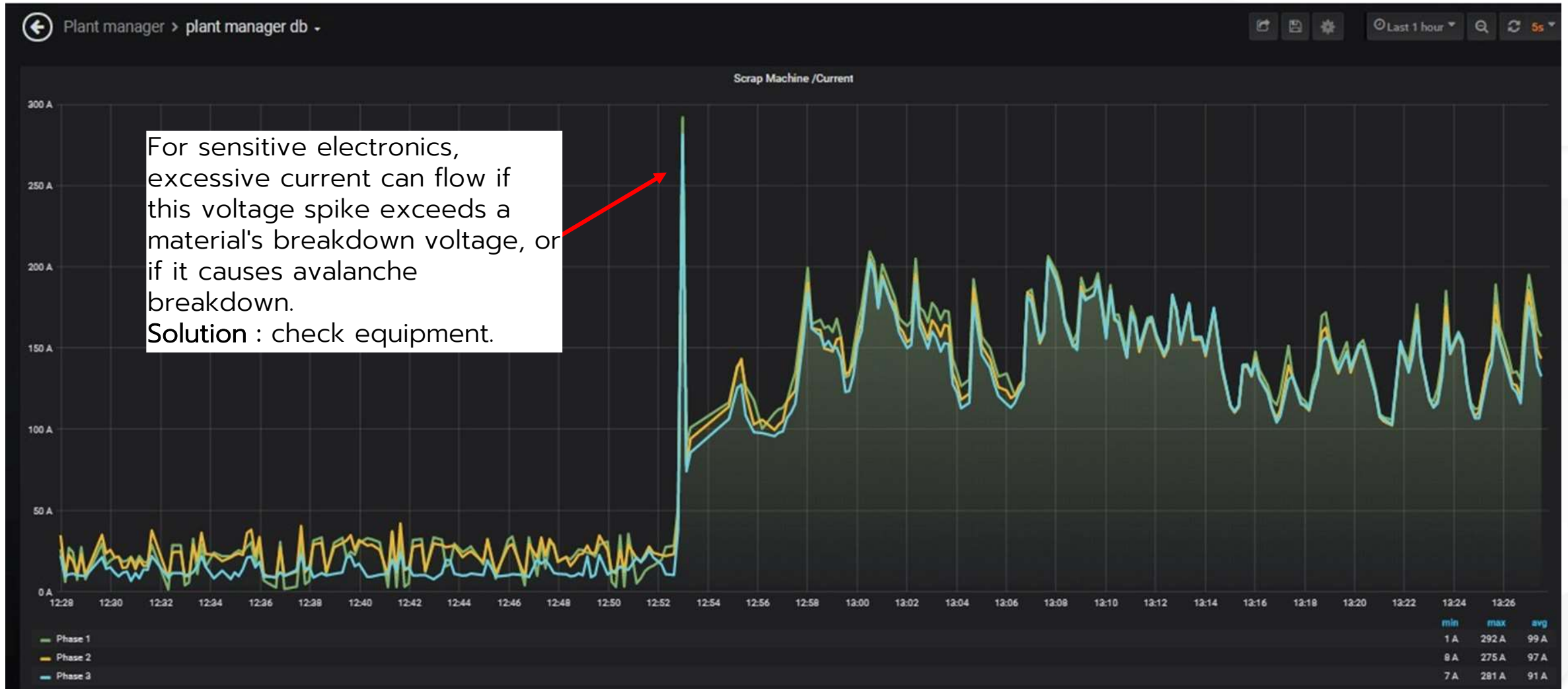




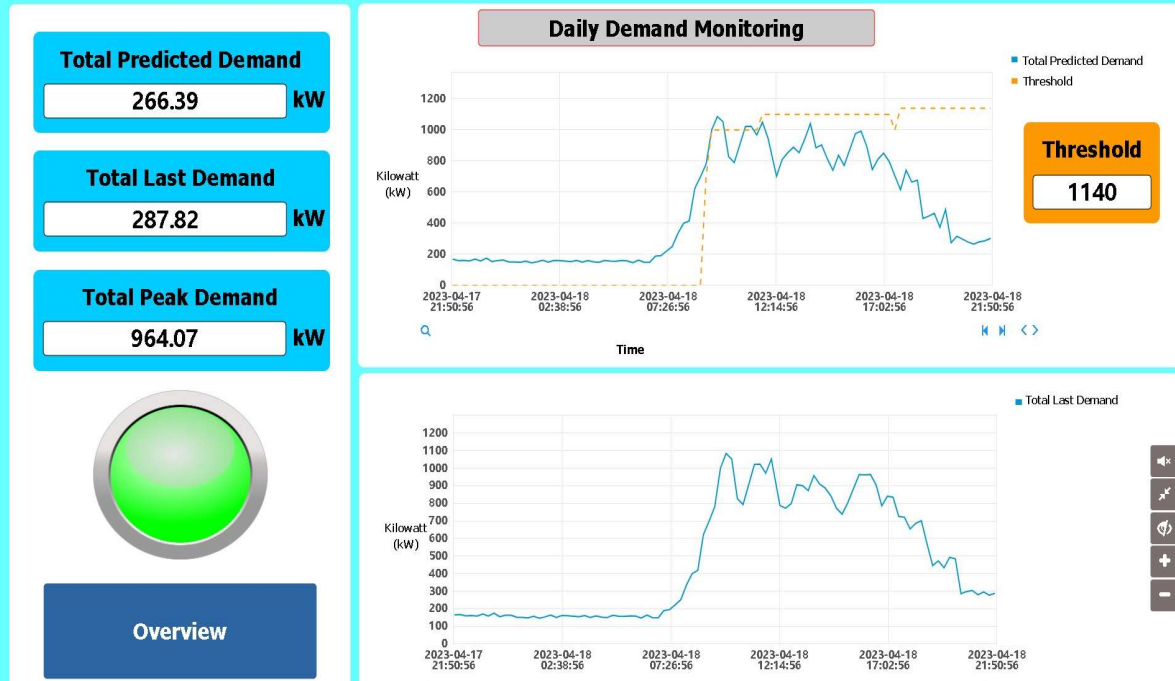
Success case (3 Phase unbalance)



Success case (spike & transient)



Success case (Peak demand Monitoring-1/2)



Pain point

Factory-A Has High Demand Charge (Peak demand) cost 147,000 Baht/month and want to reduce it.

Solution

IOT Peak Demand Monitoring, notify when peak demand exceed specific criteria.

Benefit

(Base case) Estimate 10% of Demand Charge can be eliminated per month

Save Factory Charge 176,710 Baht/year

*Factory-A Avg. Demand Charge per month (Peak demand) is 147,108 Baht and factory can eliminate Demand Charge 10% that Occurred during a day.

*Calculation Base on price 24 April 2023, Inflation and Exchange rate may vary ROI in long term

Success case (QC monitoring)



Pain point

High Operator workload for Checking Quality of Finished product manually every 15 min.

Solution

IOT thickness monitoring and notify when Product doesn't match criteria.

Benefit

1. Reduce Operator workload during operation.
2. More Production Efficiency Ex. Waste Reduction, Downtime, reduce Mis-Understanding.
3. Reduce cost in Operation 2-5% per year*

*Calculation Based on Operator wage 240,000 baht/Year, number of cost will diferent in other factor Ex. Inflation and Industrial Sector, Revenue, operation.

Success case (Find hidden cost)



Pain point

Factory-A want to know and Find hidden cost more Exactly in Production line.

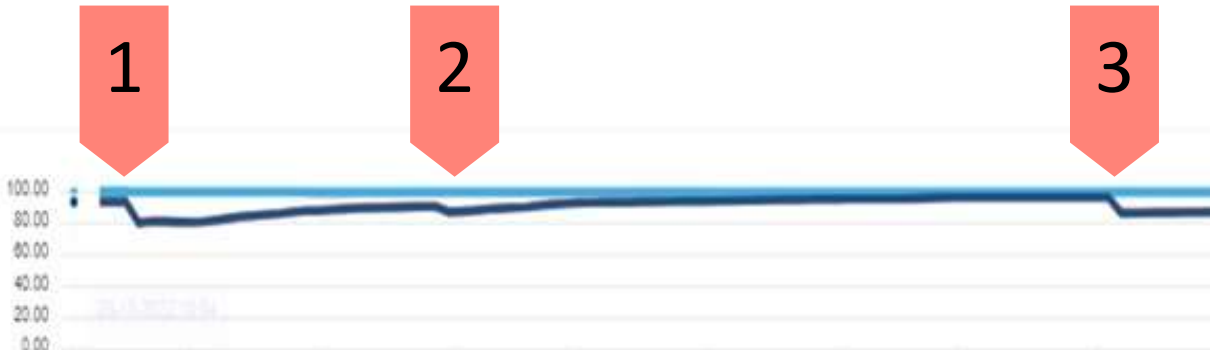
Solution

Install IOT weight monitoring & OEE Platform base on Machine and Production lot.

Benefit

1. Find Hidden cost more exactly and know where Excess cost come from.
2. Production more Efficiently based on data.

Success case (OEE Monitoring-1/2)



Result from data

Performance is dropping due to cycle time isn't suitable with real operation



Pain point

Factory-A want to improve operation efficiency because of Production period is extended more frequently.

Solution

1. Install IOT Production counting to get Machine Performance.
2. Implement OEE Solution (Trial Phase) included training, Implement, Activity to customer.

Benefit

Production more efficiently base on OEE Data ex. Revise cycle time more suitable, Data more accurately based on Digital input.

Success case (OEE Monitoring-2/2)

Data visualization report .

1. Machine Downtime report
2. FG, NG report
3. Unplan Downtime report
4. Set up time report
5. OEE report
6. Type of Defect report

Report Defect

NG Cost Worst All factories

Plan Id

Start Date

End Date

VIEW

Process	Factory-1	Factory-2	Factory-3	Total
Injection	12,081	82,021	51,200	146,202
Laser	2,845	4,220	501	7,875
Paint	800	700	500	500
Print	850	7,000	500	8,350
INK_fill	301	702	503	1,505
Assy_set	5,125	75	500	5,700
Assy_part	810	750	500	2,060
Total	20,100	85,600	51,200	150,220



Pareto of Defect

Factory
Factory1

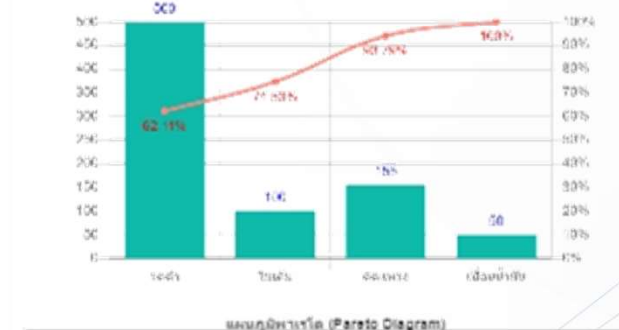
Machine
Machine1

Plan Id

Start Date

End Date

VIEW



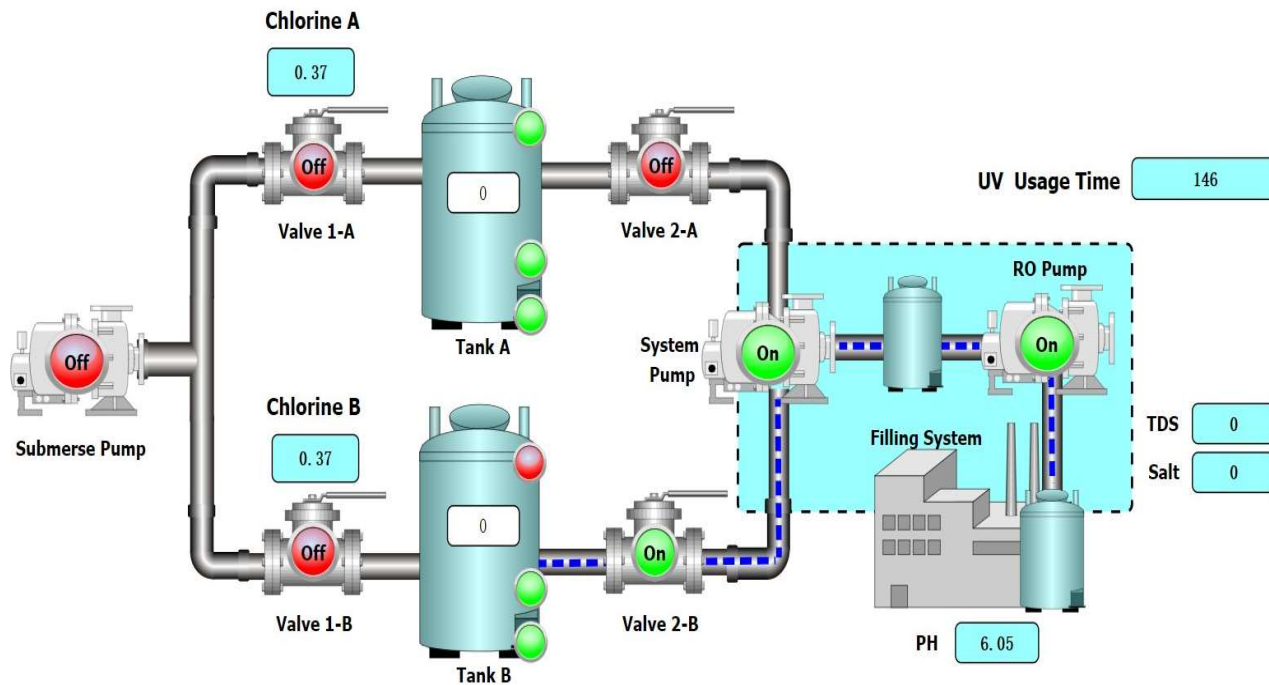
Defect Name	Volume
รอย	300
รอยดำ	100
รอยขาว	155
รอยดำ/ขาว	50

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Success case (Carbon Emission footprint)



Success case (IOT Automation)



Pain point

1. Factory-A want to reduce operation cost in long term
2. Get production data Digitally and Visualization online.

Solution

1. Install IOT utility monitoring on existing production system.
2. Design Control logic to make Factory Automation.

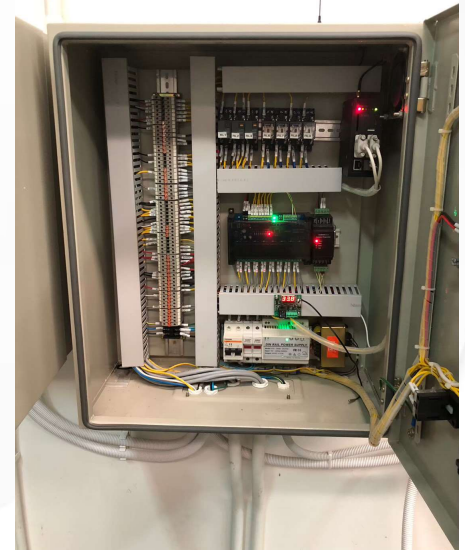
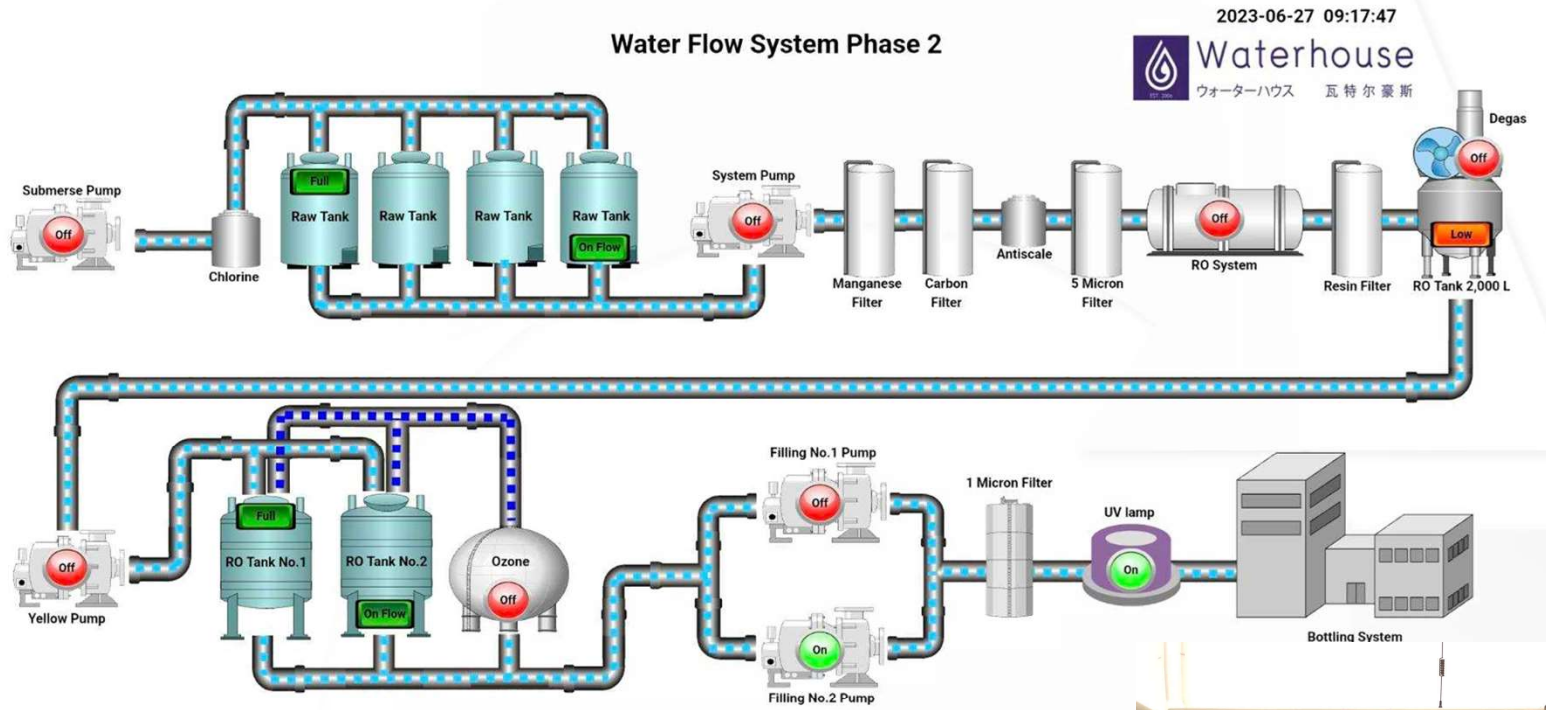
Benefit

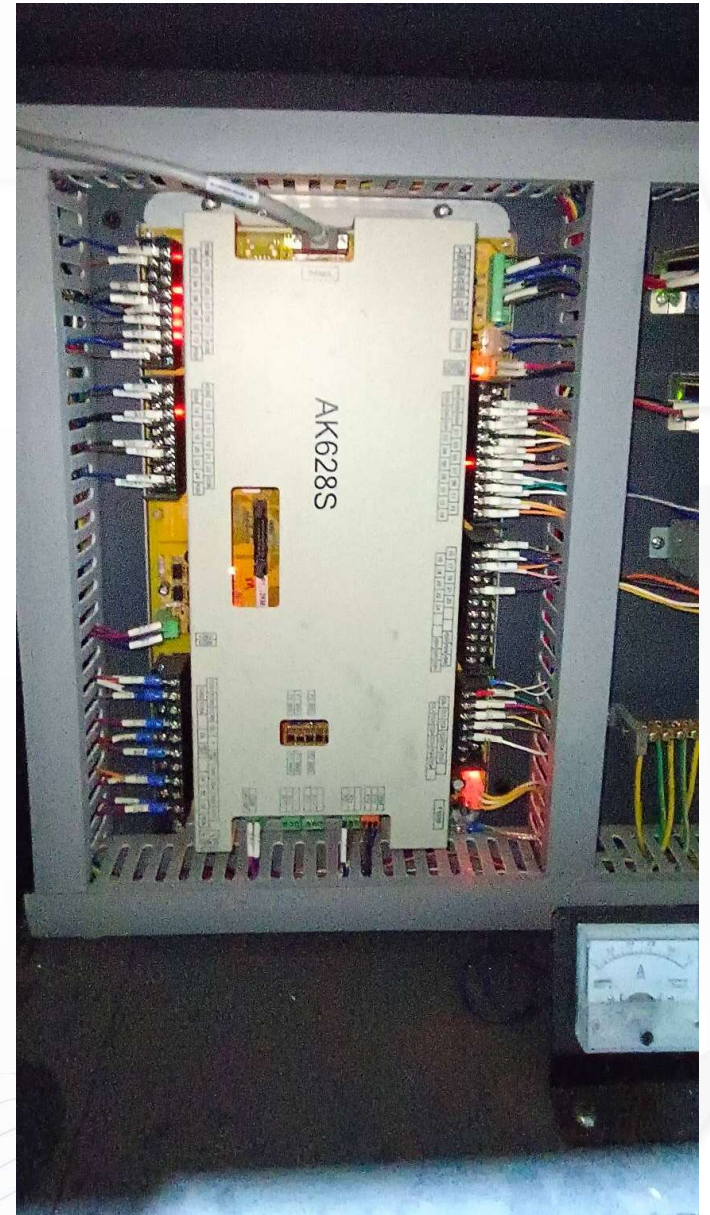
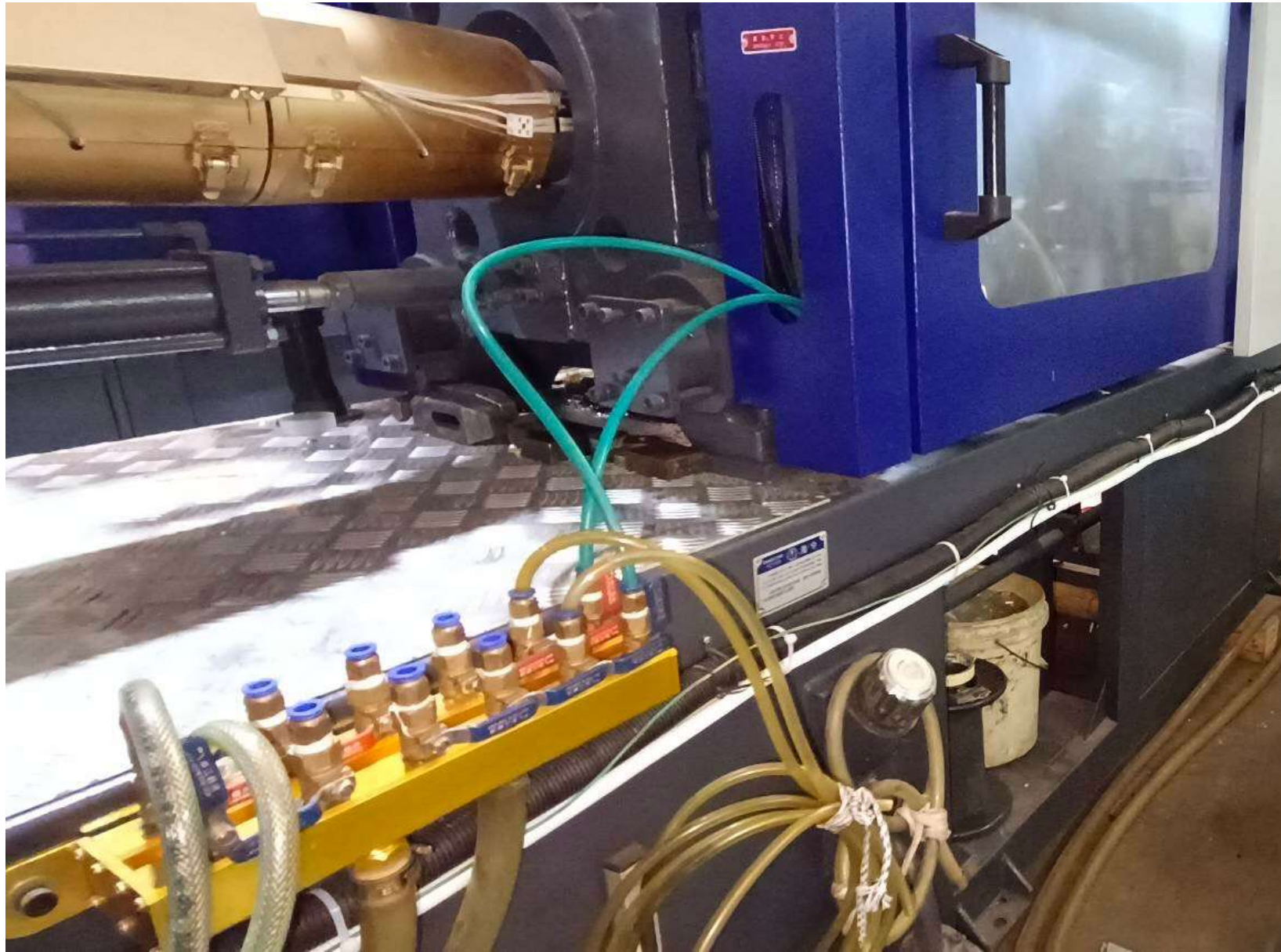
1. Reduce Operator workload during Peak Operation.
2. Reduce cost 15-22% Per year*
3. Remote monitoring and Visualization.



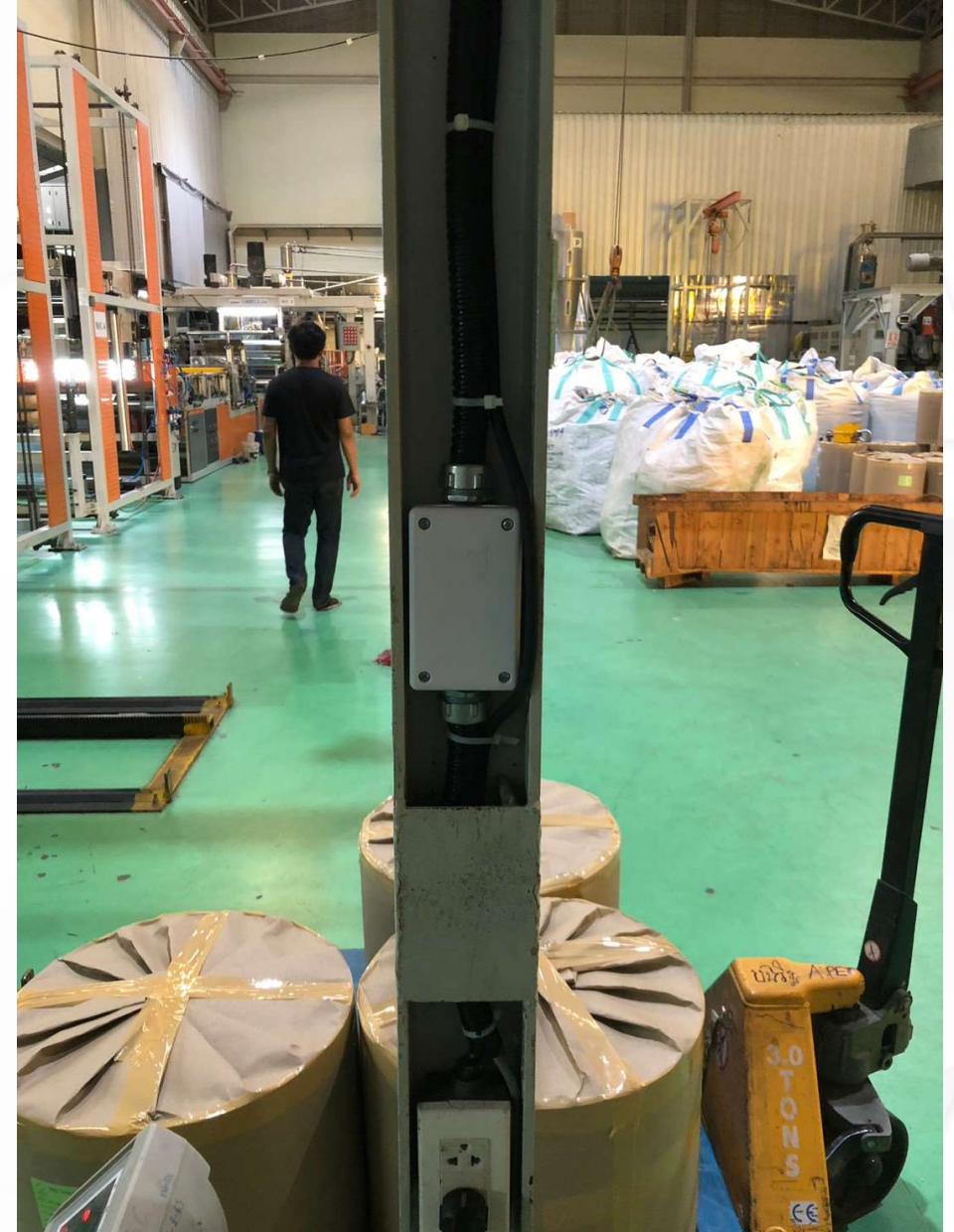
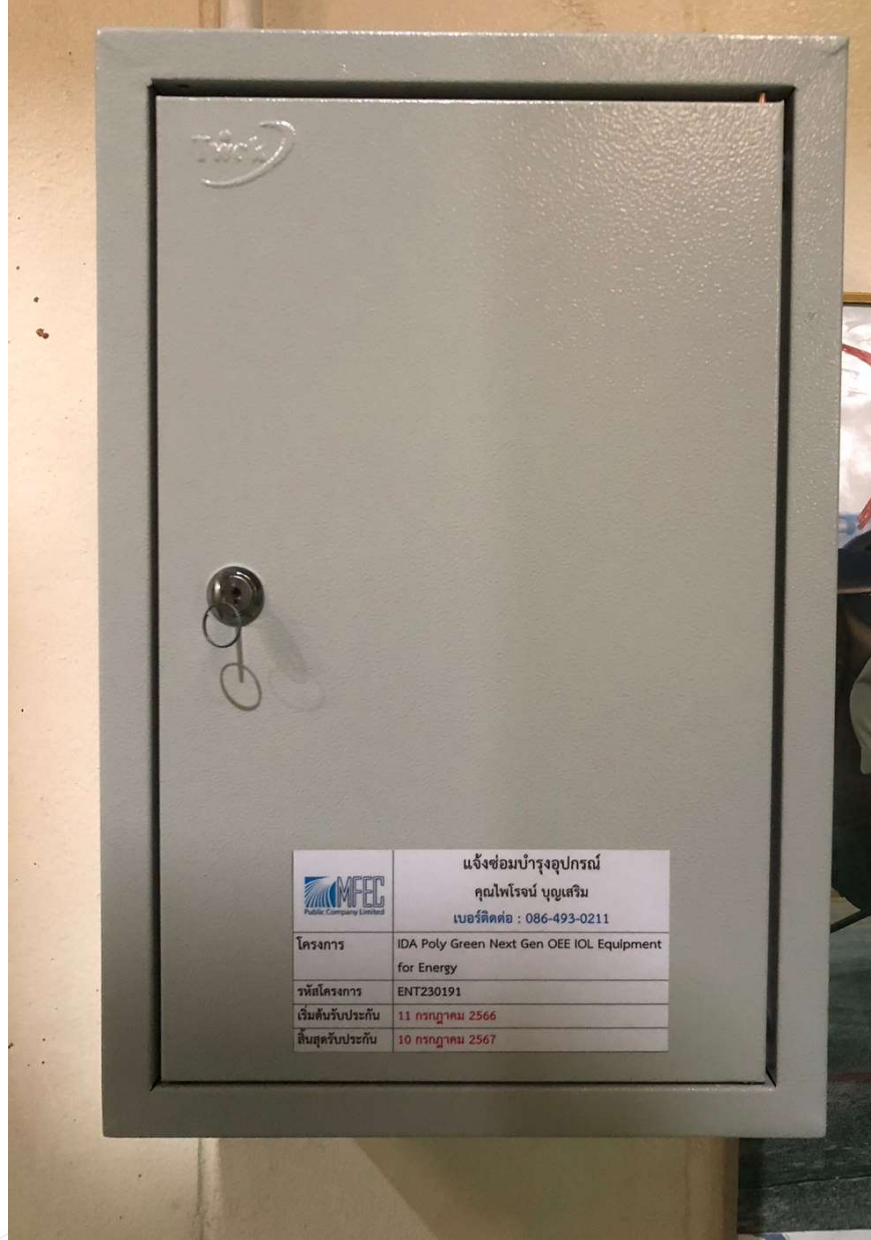
*Calculation Based on Operator wage 240,000 Baht/Year, number of cost will diferent in other factor Ex. Inflation and Industrial Sector, Revenue, operation.

3. IDA100 Project nowadays



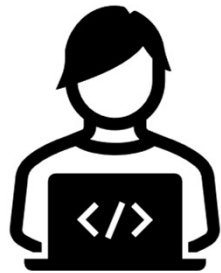






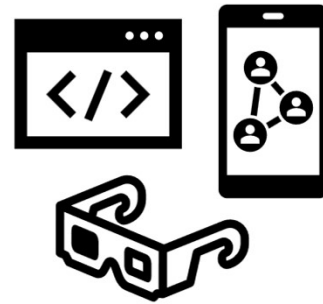
4. Why MFEC IIOT

Why MFEC IIOT



More Experienced

We Are Expert in IOT and IIOT Solution for Every Sector with many Site reference include Industrial, city, Building



More Product

We have many Product that suitable for variety of customer Ex. WMS, PMRP, OEE platform and IOT.



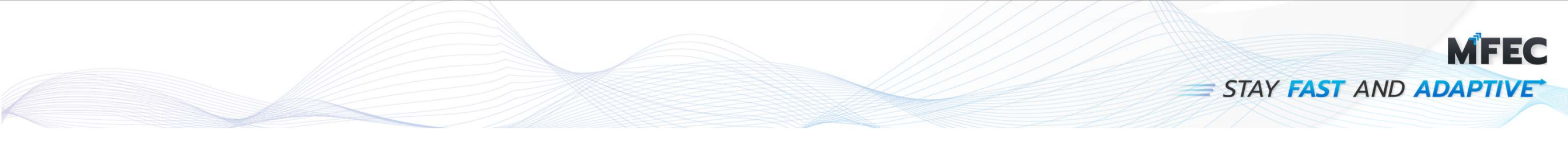
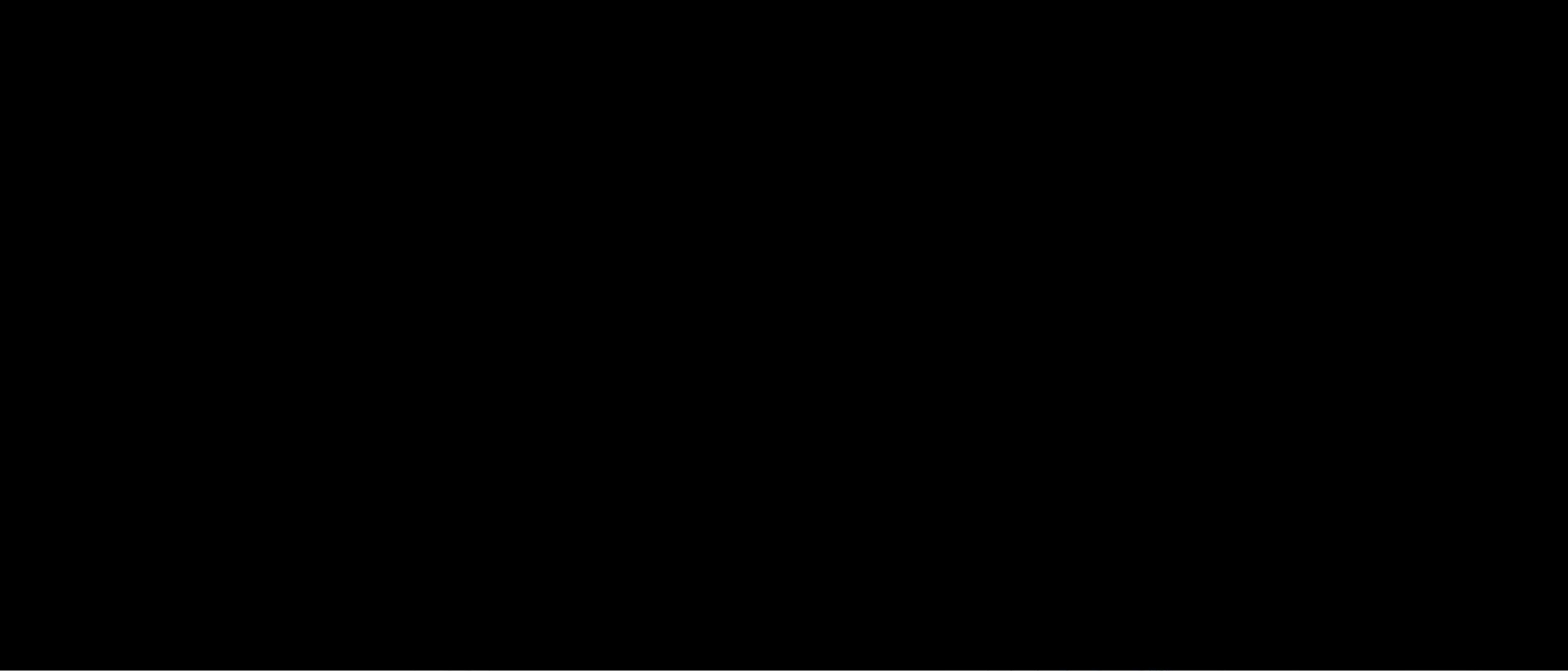
More Customize

We can Customize every Product to make every customer more satisfy.



More Benefit

We have expertise in IOT solution and Consultant for Industrial Sector.



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We utilize the latest digital technologies to support your digital journey.



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