

# **C.P. Packaging Industry Co.Ltd.**

## **[Bangplee Plant]**



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## **1: Company profile**



CPPC PUBLIC COMPANY LIMITED is a part of the global operating Packaging Business Group of Charoen Pokphand.



C.P. Packaging Industry Co., Ltd., a subsidiary of Charoen Pokphand Group of Companies, was founded in 1995. Our first plant is located in the Bangplee Industrial Estate, Samutprakarn. Our company is aimed to be a leading manufacturer of thin-wall containers under the "GREEN PACKS" trademark.

### **Our Business**



Woven Bag



Food Packaging



PVC Sheet & Coating



PVC Pipe & Fitting



Paper Core

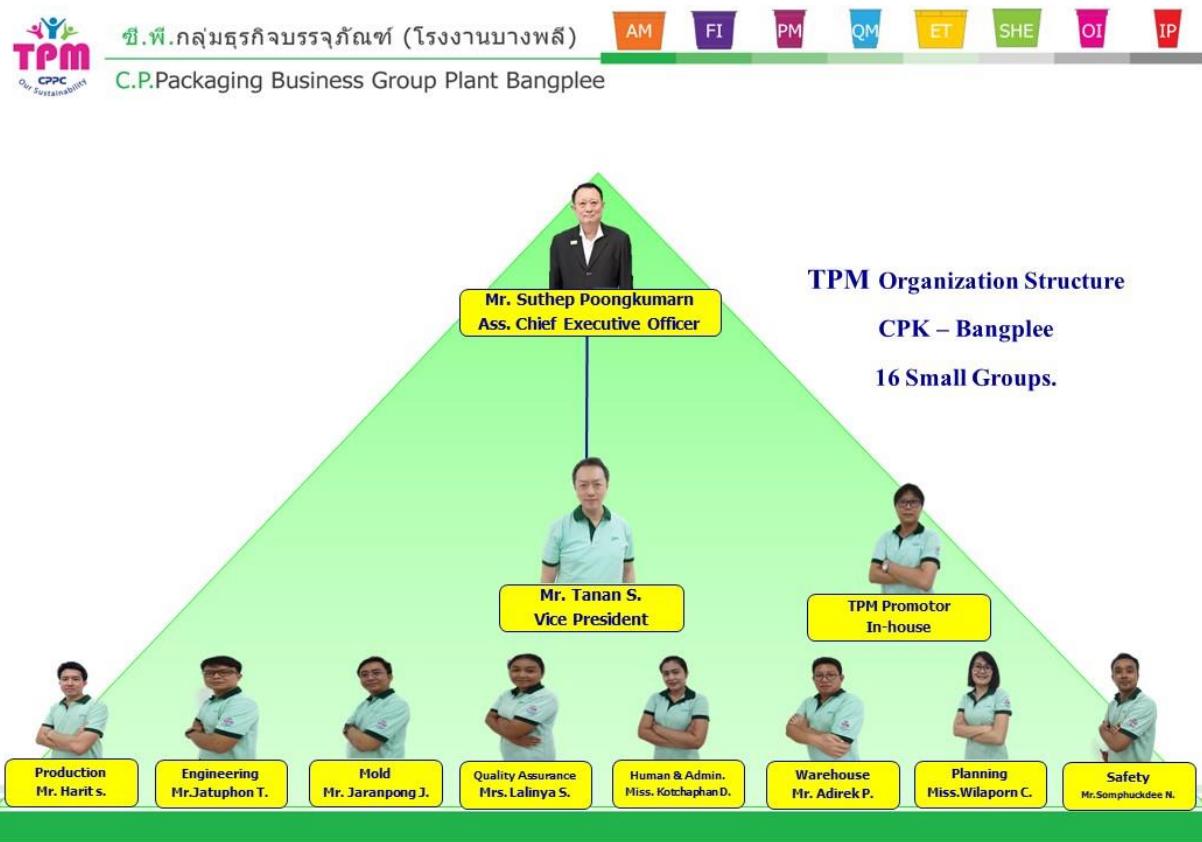


Nonwoven

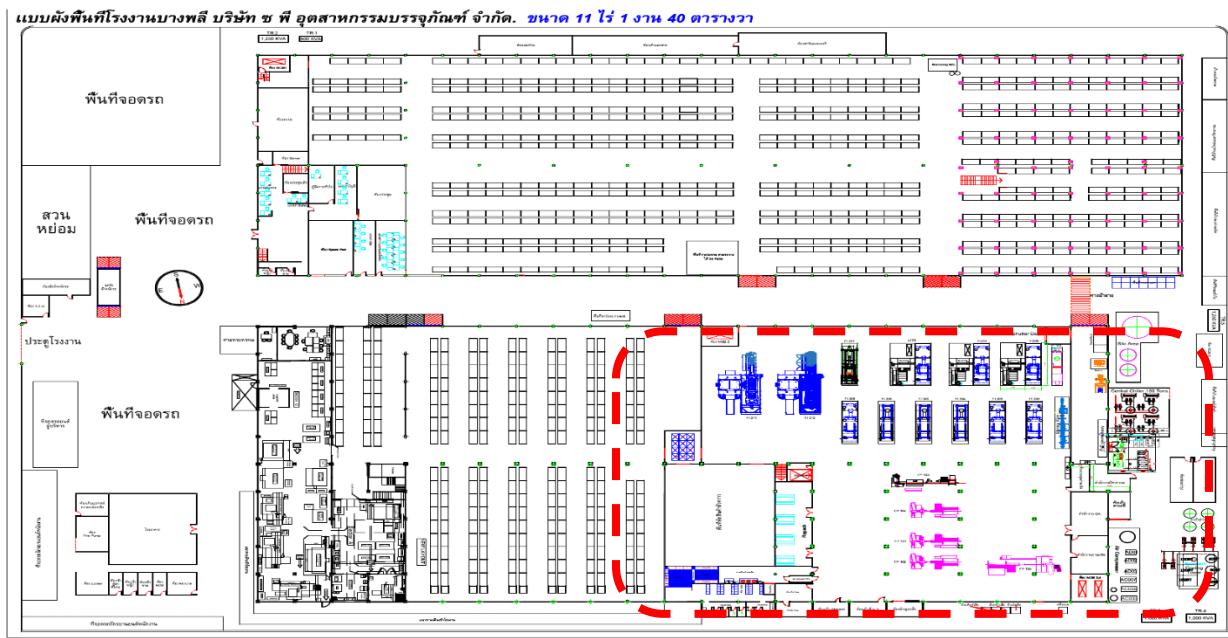
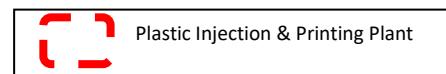
## **1.1 CP Packaging Industry [Bangplee Plant]:**

- CP Packaging Industry [Bangplee Plant] has been in 1995 for Packaging Business in C.P. group.
- The Plant has been produced Plastic Cup and Bucket
- Our Plant area 18,160 m<sup>2</sup>.
- Total 250 employees work at Bangplee Plant 121 staffs and 129 workers
- Our Production line
  - Plastic Cup and Bucket production, Printing production as following:
  - Physical of product.
    - Capacity Injection 7,000 Tons/Year
    - Capacity Printing 5,000 Tons/Year
    - Machine: 12 Plastic Injection, 3 Printing and, 1 Shrink film
    - 81 operators on 3 shift are taking care machine and 3 maintenance technicians.

## **Management Organization**

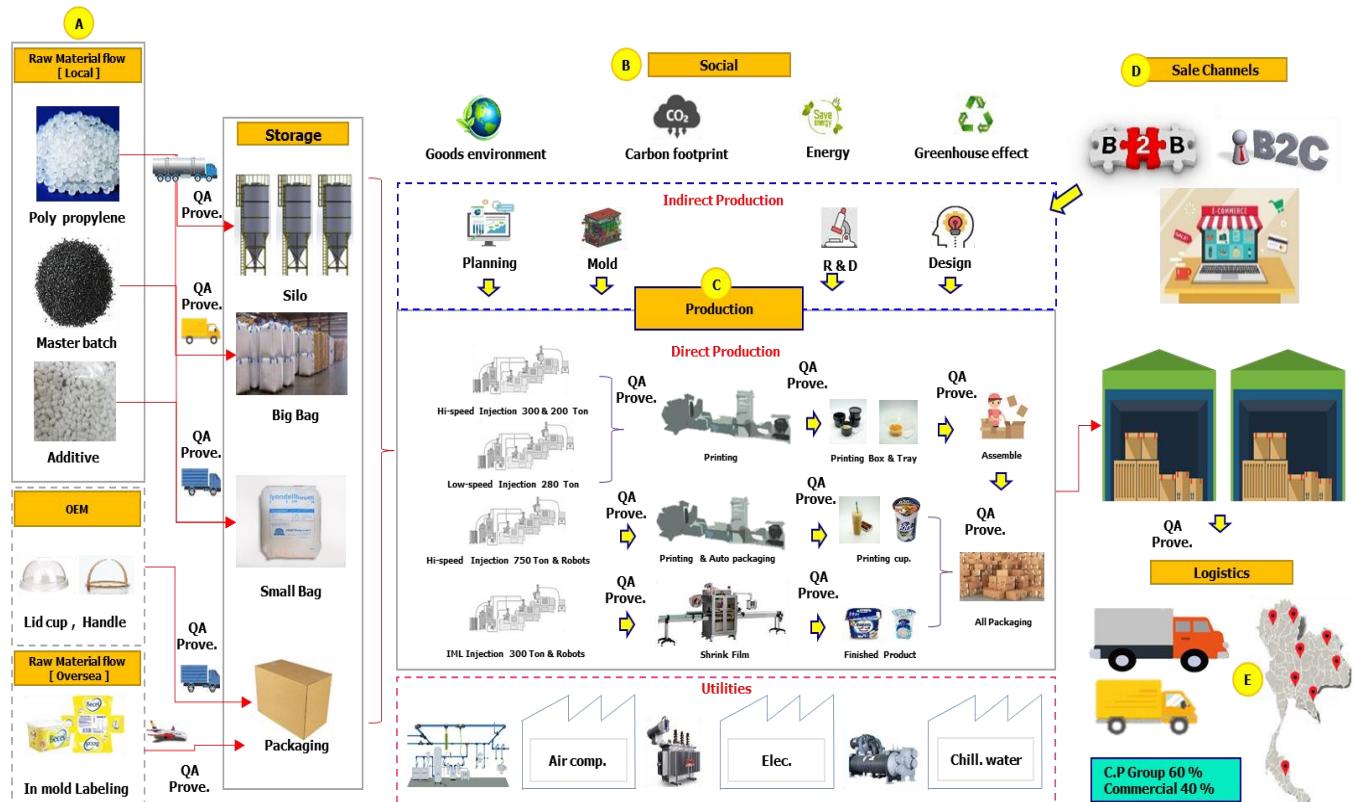


## **Plant Layout:**



Total area = 18,160 m, Total equipment = 26 Items [18 product machines, 8Utility], 3 Production Lines [ Plastic, Printing, Shrink film.]

## 1.2: Injection & Printing Process and Product

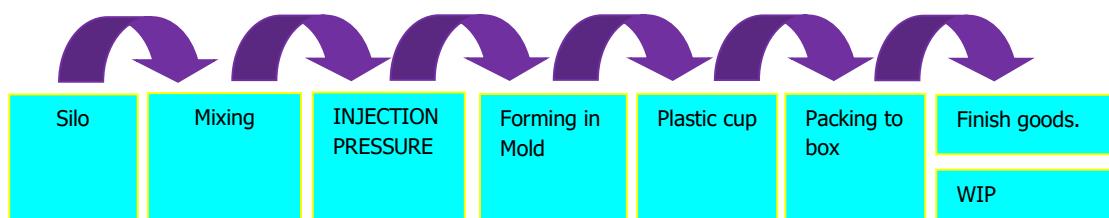


### 1.2.2) Our packaging plant produces Plastic and printing Cup.

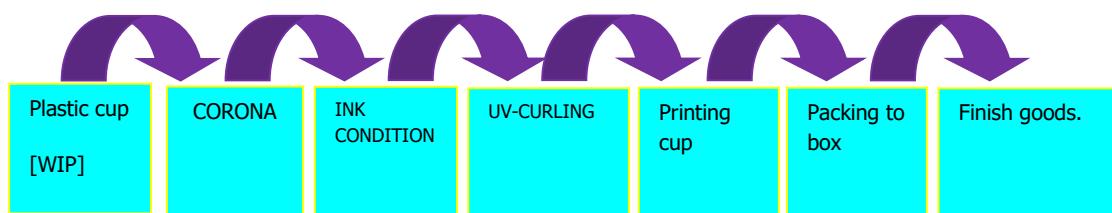


**Plastic and Printing Cup**

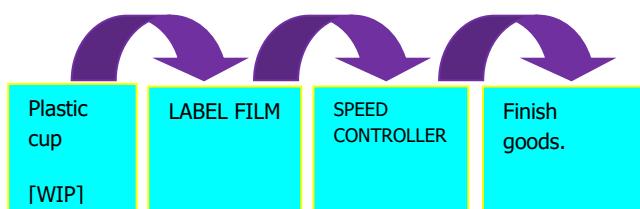
### 1.2.3) Process Flow of Injection



### 1.2.4) Process Flow of Printing

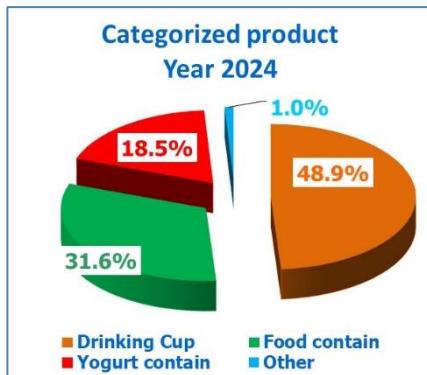


### 1.2.5) Process Flow of Shrink

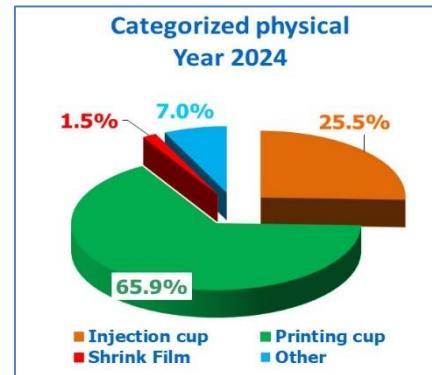


### 1.3) Type of Product

#### - Categorized Product:



#### - Categorized Physical:



### 1.4) Our Machines

#### Injection Machines group

1. Plastic Injection 750 Ton.  
300,000 Pcs. / Machine. / Day.



Injection FI-211  
Injection FI-212  
Total 2 Machines

2. Plastic Injection In mold labeling  
110,000 Pcs. / Machine. / Day.



Injection FI-209  
Injection FI-210  
Injection FI-402  
Total 3 Machines

3. Plastic Injection 300 Ton  
60,000 Pcs. / Machine. / Day.



4. Plastic Injection 200 Ton  
60,000 Pcs. / Machine. / Day.



Injection FI-308  
Injection FI-309  
Injection FI-310  
Total 3 Machines

Injection FI-304  
Injection FI-305  
Injection FI-306  
Total 3 Machines

**Totally  
1,326,000 Pcs/Day.  
39.7 Million/Month.**

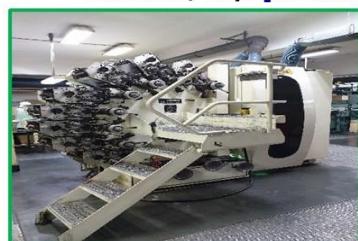
\* 5. Plastic Injection 280 Ton [ Low Speed ] 18,000 Pcs. / Machine. / Day.

#### Printing Machine group & Shrink Film Machine.

1. Plastic Printing with auto packaging  
500,000 Pcs. / Machine. / Day. [FP-105]



2. Plastic Printing 400,000 Pcs./  
Machine. / Day. [ FP-104 ]



2. Plastic Printing with auto packaging  
650,000 Pcs. / Machine. / Day [FP-106]



4. Shrink Film 100,000 Pcs/Day. [ SHF-01 ]



**Totally  
1,200,000 Pcs/Day.  
36 Million/Month.**

## 2 : Milestones on the journey of Manufacturing Excellence.

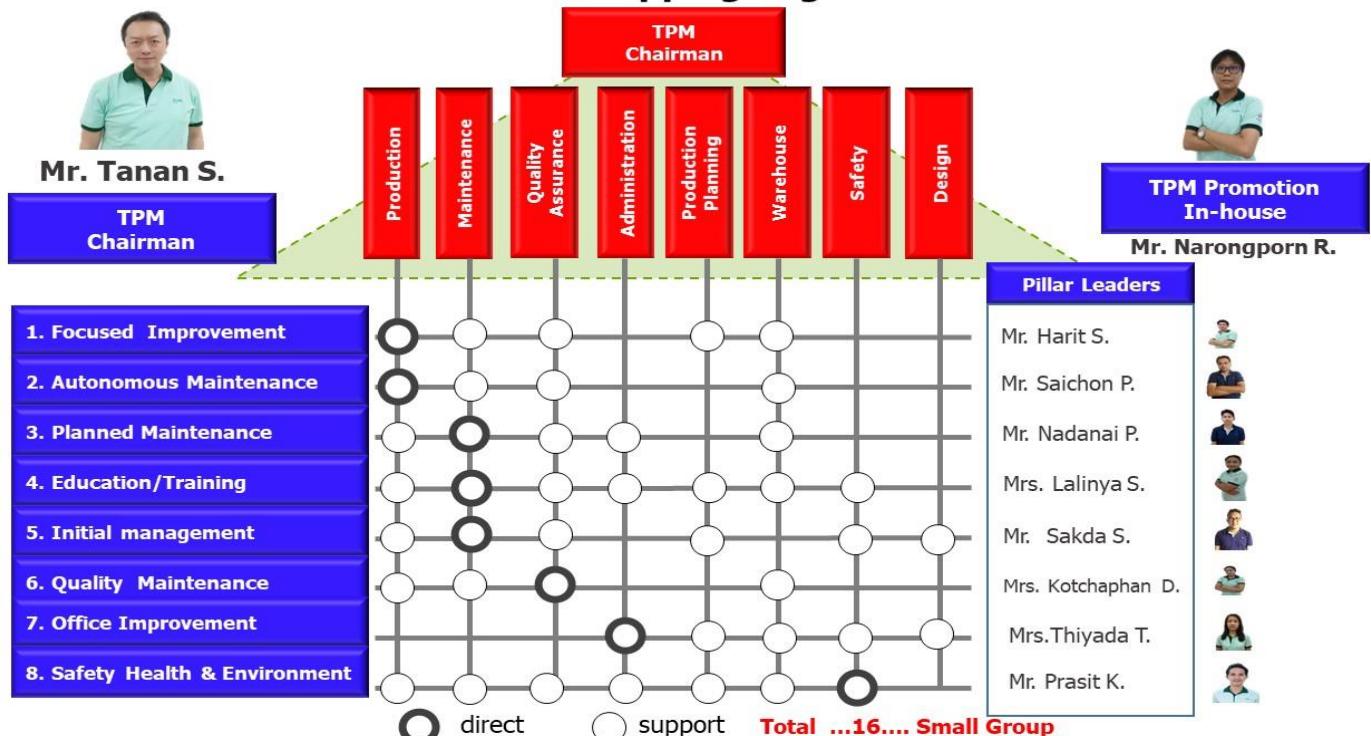
### Message from the COO on TPM Kick off Day (19th December 2018)



Mr. Chatree rattanawattanakorn Chief Operating Officer 2018 said that Our plant be can doing for achieved target by Increase productivity reduce 16 major losses, make safety Culture and good environment to three zero is no accident no defect and no breakdown. TPM activity our focus on participation of small group and me set strategy TPM is core Management.

Our plant use TPM tools for a while We should doing follow up on TPM Master Plan. Objective of TPM kick Off for participate & Promotion TPM activity. Awareness for Improve to easy process and highest Efficiency.

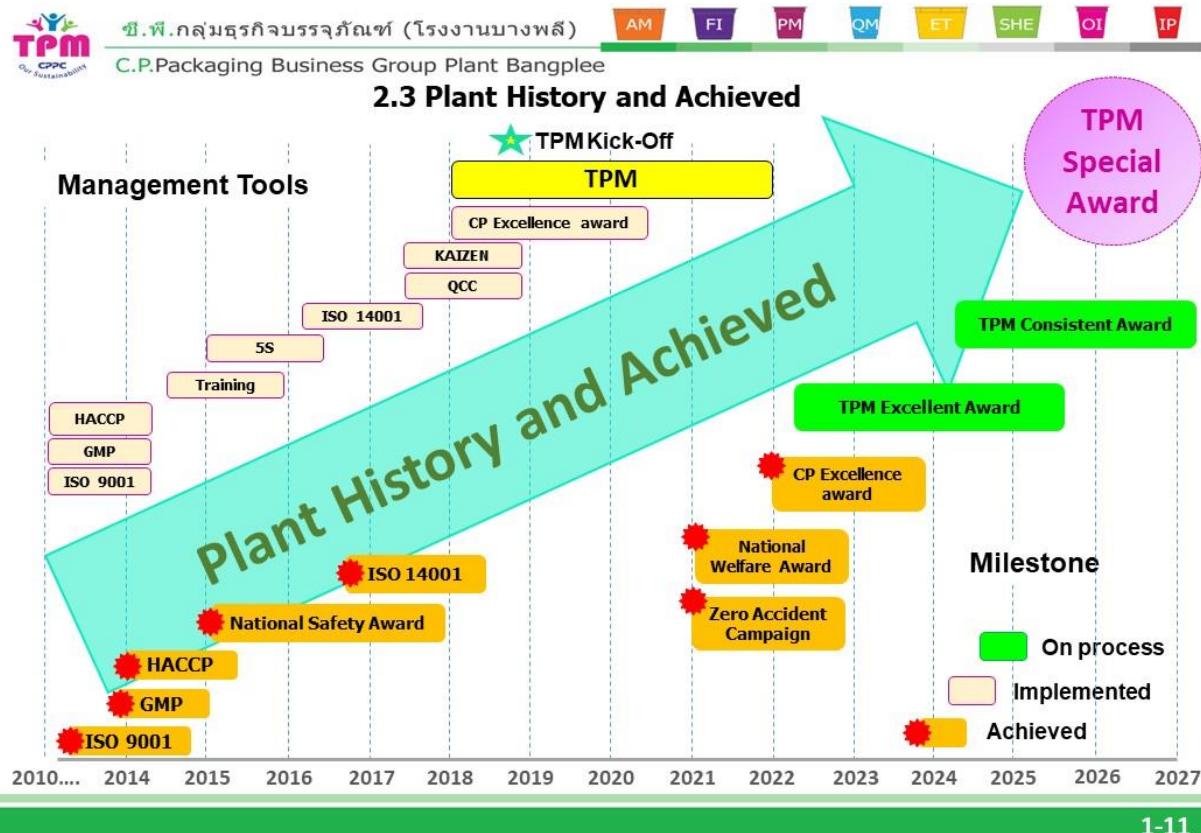
### 3.2 TPM Overlapping Organization



### TPM Steering Committee member and Pillar Members

Pillar Member							
FI Pillar	AM Pillar	PM Pillar	ET Pillar	EM Pillar	QM Pillar	OI Pillar	SE Pillar
 <b>Harit</b> <b>Saichon</b> <b>Lalinya</b> <b>Wiraporn</b> <b>Nadanai</b> <b>Adirek</b> <b>Ekapot</b> <b>Sakda</b>	 <b>Saichon</b> <b>Nadanai</b> <b>Jaranpong</b> <b>Preeyaporn</b> <b>Songritk</b> <b>Lalinya</b> <b>Wiraporn</b>	 <b>Nadanai</b> <b>Prasit</b> <b>Damronsak</b> <b>Weerachai</b> <b>Yuthana</b>	 <b>Kotchaphan</b> <b>Wiriyaporn</b> <b>Jatuphon</b> <b>Prasit</b> <b>Nadanai</b> <b>Ekapot</b> <b>Saichon</b>	 <b>Sakda</b> <b>Nadanai</b> <b>Nadanai</b> <b>Kanjana</b> <b>Saichon</b> <b>Lalinya</b> <b>Wiraporn</b> <b>Prasit</b>	 <b>Lalinya</b> <b>Saichon</b> <b>Harit</b> <b>Ekapot</b> <b>Nadanai</b> <b>Sakda</b>	 <b>Thiyada</b> <b>Adirek</b> <b>Wiraporn</b> <b>Maleewan</b> <b>Kotchaphan</b> <b>Prasit</b>	 <b>Prasit</b> <b>Somphukdee</b> <b>Adirek</b> <b>Nadanai</b> <b>Kotchaphan</b> <b>Lalinya</b> <b>Saichon</b> <b>Ekapot</b>

## 2.1 Milestone and Road Map



### TPM – History.

2015 -2017: Start learning and launched basic tool 5S, QCC

2018: Start learning and launched the TPM program, autonomous maintenance program for management team and begin manager model activity.

2018: Implement WCM program with some autonomous maintenance small group team in section model and start focused Improvement, planned maintenance pillar and kaizen activity.

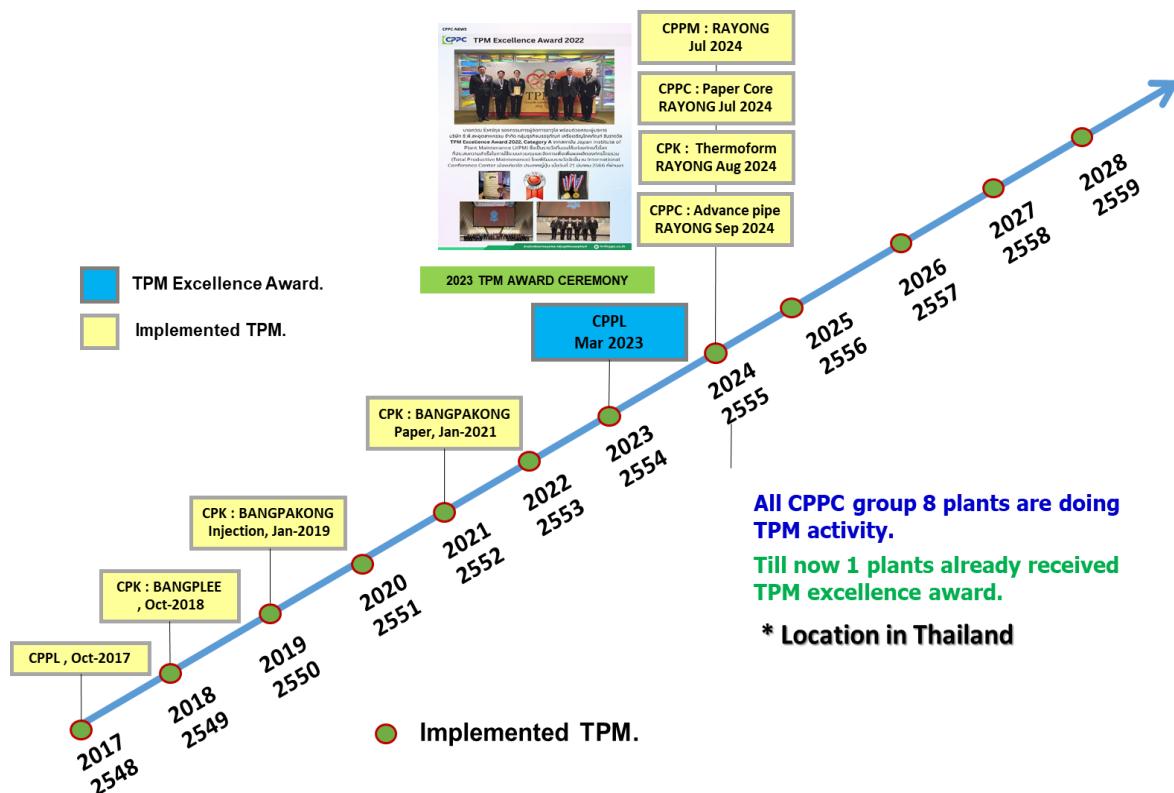
2018: Start safety & environment pillar, education & training pillar, quality maintenance pillar and office improvement pillar, Early management Pillar

2018: Kick of TPM by COO (model machine complete step 3 of manager model activity)

2019-2021: Situation COVID -19., Continue TPM activities consistently

2022: AM Pillar Pass Top management step 4 more 75 %

## 2.2 History of TPM Activity in Packaging Business



### TPM – History Packaging Business In Thailand.

2017: CPPL – Sikhio plant start and implement TPM

2018: CPK – Bangplee plant start and implement TPM

2019: CPK - Injection Bangpakong plant start and implement TPM

2021: CPK- Paper Bangpakong plant start and implement TPM

**2023: CPPL – Sikhio plant already received TPM Excellence Category A**

2024: CPPM - Rayong plant start and implement TPM

2024: CPPC - Advance pipe Rayong plant start and implement TPM

2024: CPK - Thermoform plant start and implement TPM

2024: CPPC – Paper-core plant start and implement TPM

### 3: Benefits achieved

### **3.1 Policy deployment Top Down & Bottom up (Hoshin Kanri)**

### 3.2 Tangible business results

The benefit achieved will show in term of P, Q, C, D

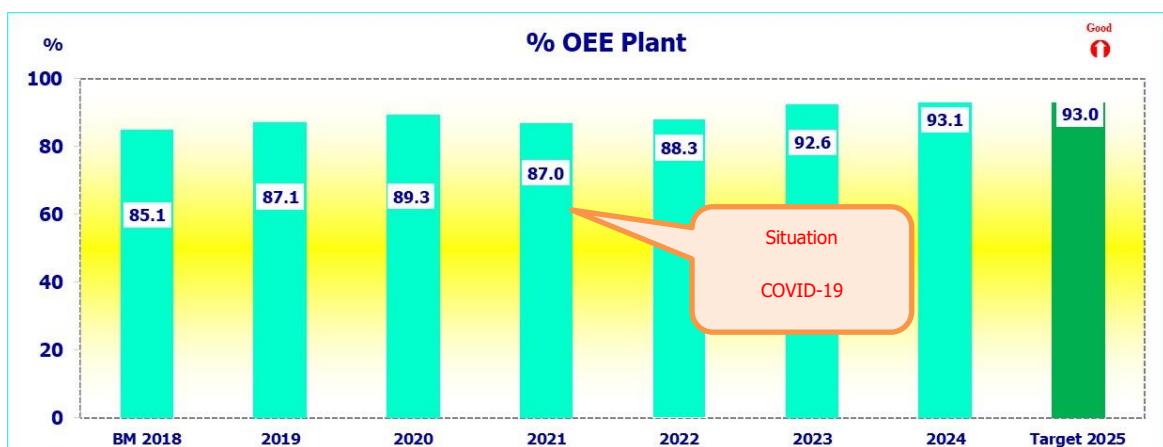
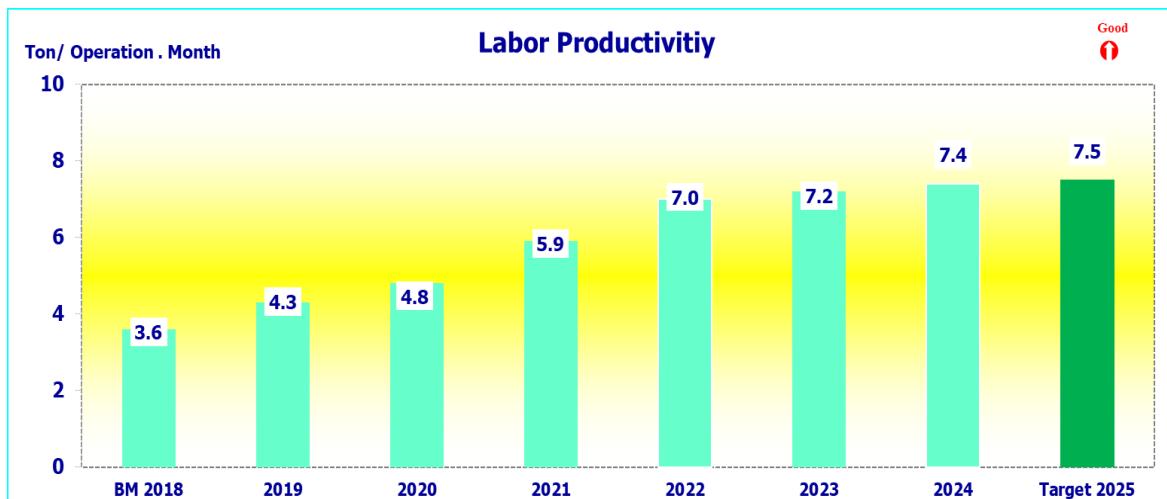
P-Productivity is Labor Productivity, OEE percentage.

Q-Quality is complaints number.

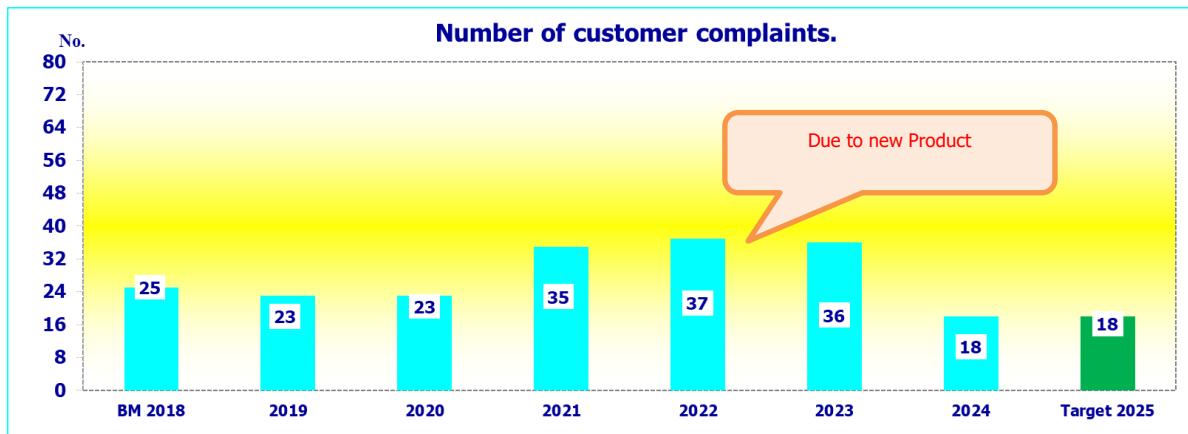
C-Cost is production overhead cost.

D-Deliver is on time delivery Rate.

**Productivity:** Labor productivity, OEE



**Quality:** Measurement is complaints number.



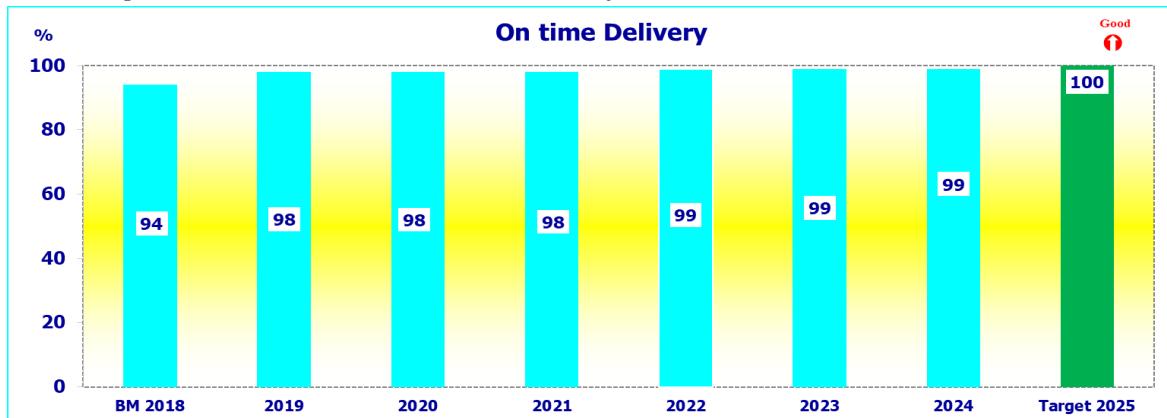
**Cost:** Measurements are production overhead cost.



The Production overhead cost is the composition of

1. Variable cost.
2. Fix cost.

**Delivery:** Measurement is on time delivery Rate.



### 3.2 Employee involvement, motivation and other intangible improvements that have occurred.

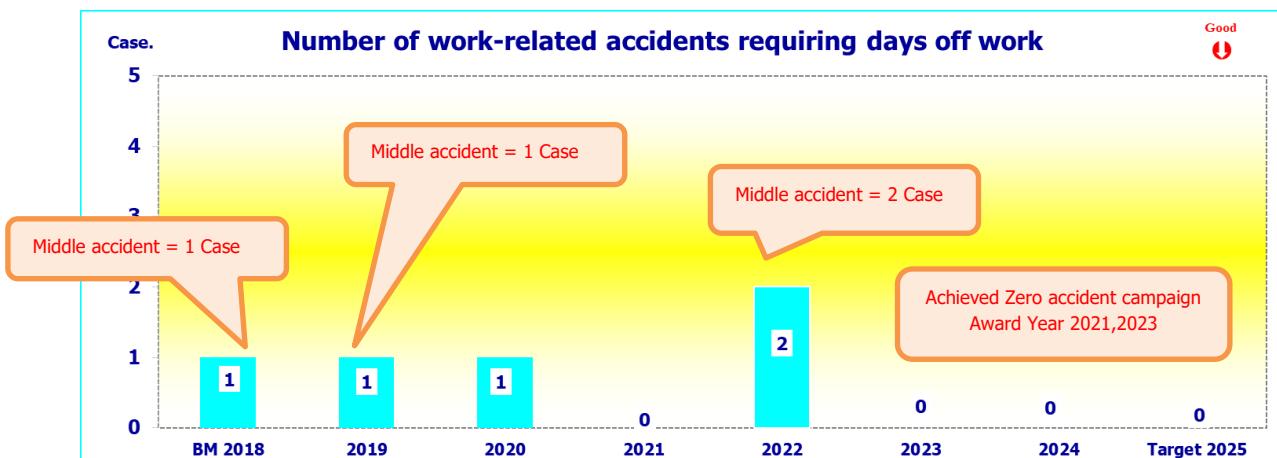
The benefit achieved will show in term of S, M, E,

S – Safety is number of work-related accidents requiring days off work.

M- Morale is employee satisfaction, Kaizen Activity

E - Environmental is community complaints /year.

**S-Safety:** Measurement is number of work-related accidents requiring days off work.

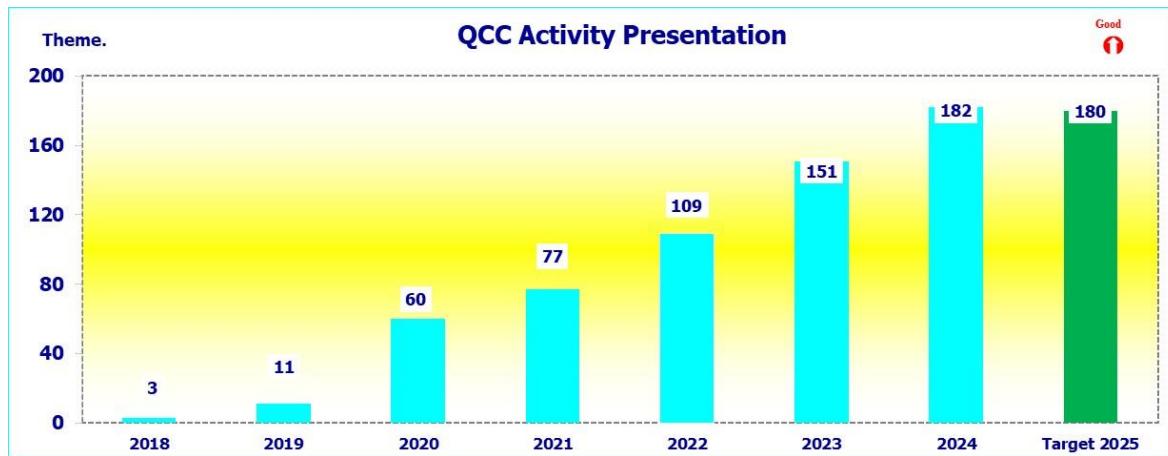


- \* Minor accident = No leave,
- Middle accident = 1 - 7 Days leave.
- Major accident = more than 7 Days.

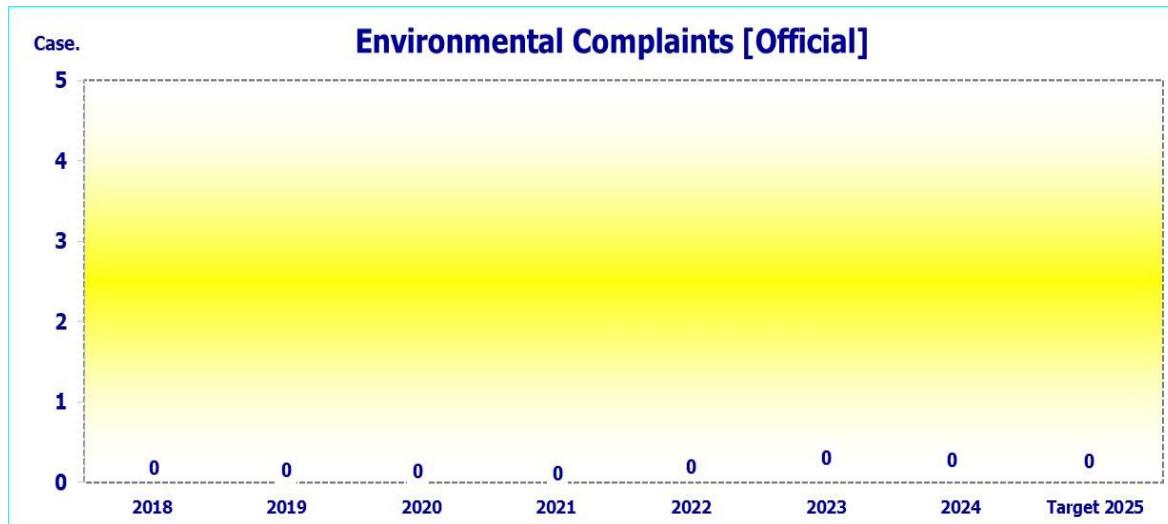
**M-Morale:** Measurement is employee satisfaction.



**M-Morale:** Measurement is QCC Activity.



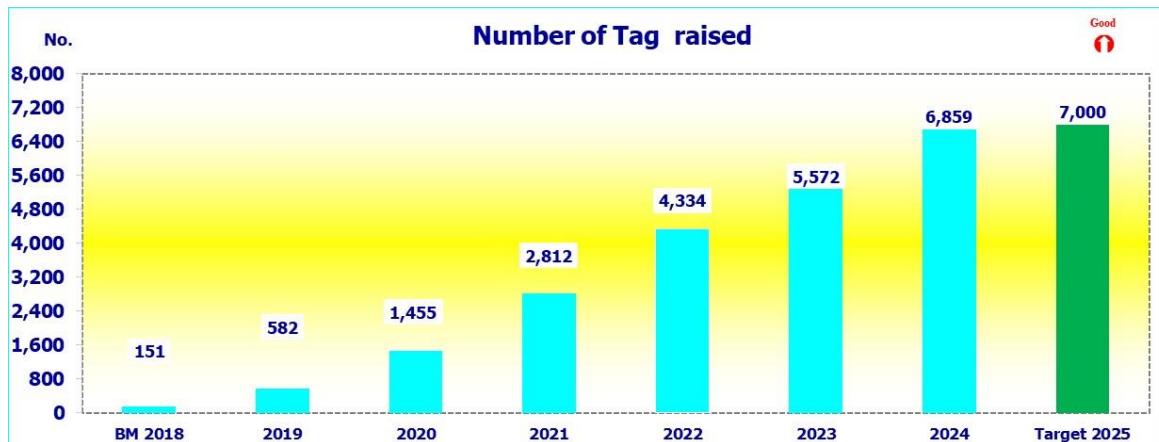
**E-Environmental:** Measurement is Community complaints /year.



#### **4: Key of our Manufacturing Excellence.**

We expand TPM team to all area of the factory, such as Autonomous Small Group team, 5S team and project improvement team. So all employee participate to the TPM activities and for 2018 the Involvement is 100 % or 250 employees.

Employees in shopfloor has much raise the Tag.



Small group in shopfloor has much improve kaizen point By QCC Activity & Kaizen activity



## 5.1 Others Activities:

5.1. Do you have a program where all employees can participate in TPM?

### 5.1.1 TPM Kick Off

- 19<sup>th</sup> December 2018, C.P. Packaging Industry Co.Ltd. [Bangplee Plant] kick off TPM.



5.1.2 COO observe Model Machine with Small Group on Master Plan.



5.1.3 TPM chairman audit Model Machine step with small group on Master Plan



5.1.4 Consultant visited onsite for advised a small group in building Section Model in their onsite



## 5.2 Plant visit as part of TPM activities involving multiple departments.

CPPC President visiting on QC small activity on 21<sup>th</sup> August 2019. It started since 7 a.m. to 9 a.m. By leader pillar team of TPM and small group welcomed and on-site presentations.



Operator advised AM Activity for president



EN Small Group was present on loss elimination activity.

COO CPK group visiting TPM Activity and small group on 21<sup>th</sup> August 2019. It started since 7 a.m. to 9 a.m. with leader pillar team of TPM and small Group welcomed and on-site presentations



Operator advised AM Activity for COO at Printing Machine



Operator advised AM Activity for COO at Injection Machine

CPPC Sikhio visiting TPM Activity and small group on 4<sup>th</sup> September 2019. It started since 9 a.m. to 12 p.m. with leader pillar team of TPM and small group welcomed and on-site presentations



5.3 Special activity 'TPM new LOGO competition' for all employee can send idea of the new LOGO.



First TPM Logo (2017)

5.4 The program allowing employees to be recognized their achievements.



TPM Gallery Board [Total8 Pillar]



Quality Maintenance Board [ Example]



KTY talk by safety officer



AM cheer up promotion



QCC Presentation Board for present Reduce loss activity on front line.

5.5 Create a Skills Development Centre room and establish a Skills Matrix for operators to practice using the dojo model and cut models, while also providing Autonomous Maintenance member training and skills practice based on the ET Master Plan, including testing trophies and skills assessments



### Skills Development Centre



### Basic engineering 6 Module [OPL]



### [Off-JT]



AM member practice using the dojo model and cut models and implement in production line.

## 5.6 Top management involved in the audit of completion of Autonomous Maintenance (5 SG) Planned Maintenance (2 SG). ແລະ Check sheet Audit 1, 2,3 and step 4

#### 5.7. Pillar activity boards displayed and reviewed by top management.

- Top Management audit Autonomous Maintenance Step 4 at the shop floor

