

# Company profile

## 1. Company, Plant/Factory Profile

### 1.1 Group profile

SIG is a leading packaging solutions provider for a more sustainable world headquartered in Neuhausen, Switzerland. Has over 170 years of industrial experience, over 115 years in food and beverage packaging and more than 45 years in aseptic filling. We had more than 8400 employees' partner with more than 220 leading food and beverage producers in more than 100 countries. SIG produces over 48 billion packs a year, filling 10,000+ products in over 50 categories. Picture below is standardized SIG logo for all plants in SIG.











After the M& A for Evergreen and Scholle IPN in 2022, SIG now become a one-stop packaging partner, offers packaging, filling machines and processing for dairy, beverages, that provide sustainable product and package solutions to now meets the needs of millions of people around the world –from breakfast tables and boardrooms to coffee shops and canteens.

### 1.2 Plant profile

There are 2 aseptic packaging plants at Suzhou. PSU is short for “plant Suzhou 1”. Located at No. 399, Xinglong Street, Suzhou Industrial Park. The plant covers an area of 60,000 square meters. PSU started its operation in 2004, with around 12 Bio yearly capacity, the sleeves produced by PSU are supplied to 56 domestic customer factories and 16 foreign countries and regions. Most of our customer comes from domestic customer.

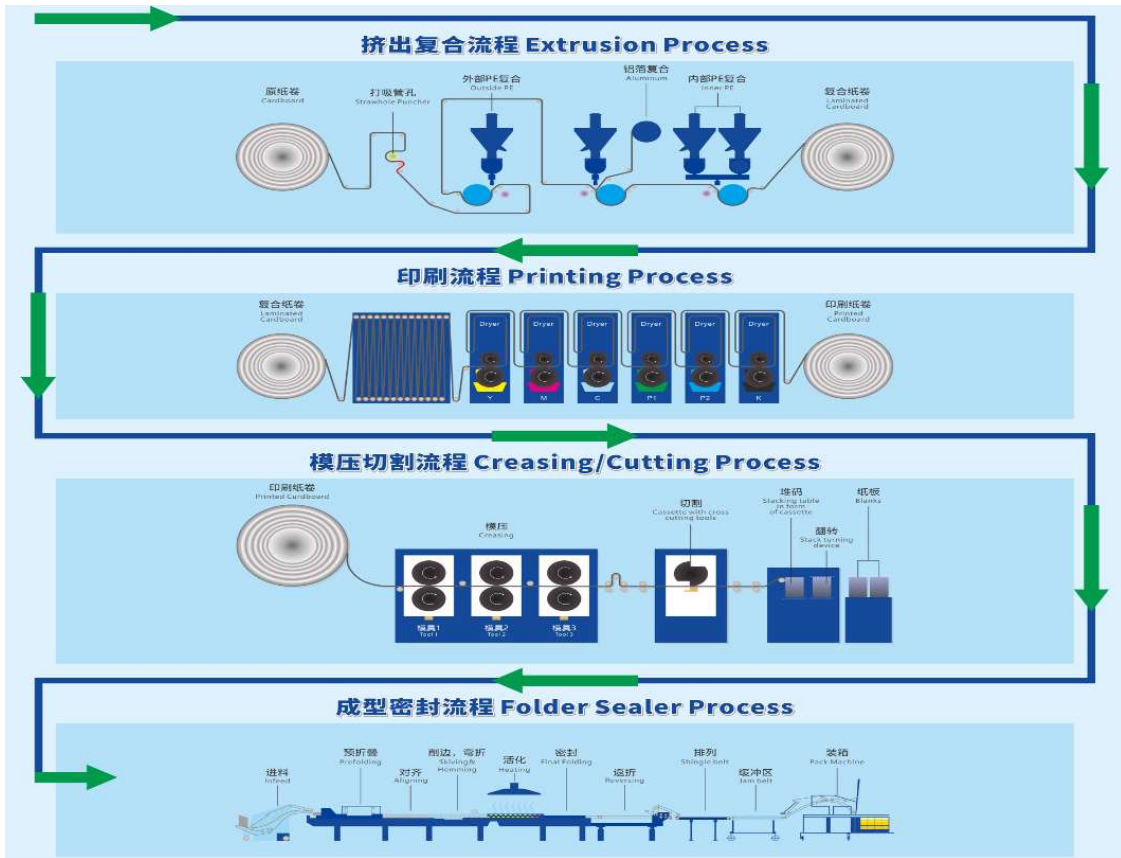
#### 1.2.1 Products

Basically, PSU provide Carton packaging/sleeves, Package portfolio is as below, totally 8 families& 33 types:

Format	Volume (ML)	Example
CB1	125, 150, 200, 250	
CB7	125, 150, 200, 250, 300, 330, 350	
CF7	200, 350	
CB3	500, 750, 1000	
CB5	250, 500, 1000	
CB12	125, 180, 200	
CI18	180, 200, 250, 300, 330, 350	
OX	180, 200, 250, 300, 330	

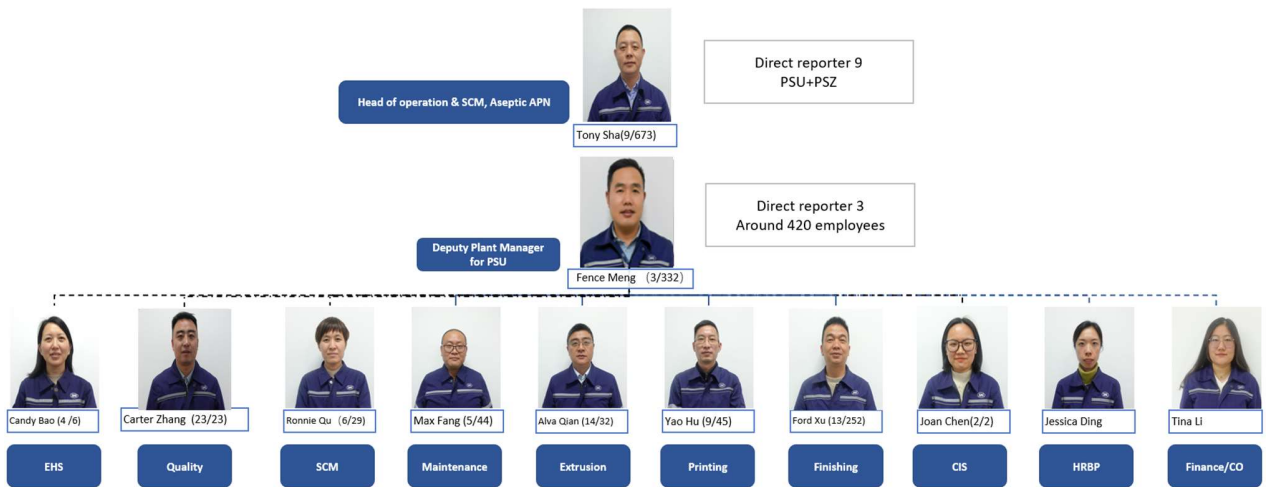
### 1.2.2 Process technology

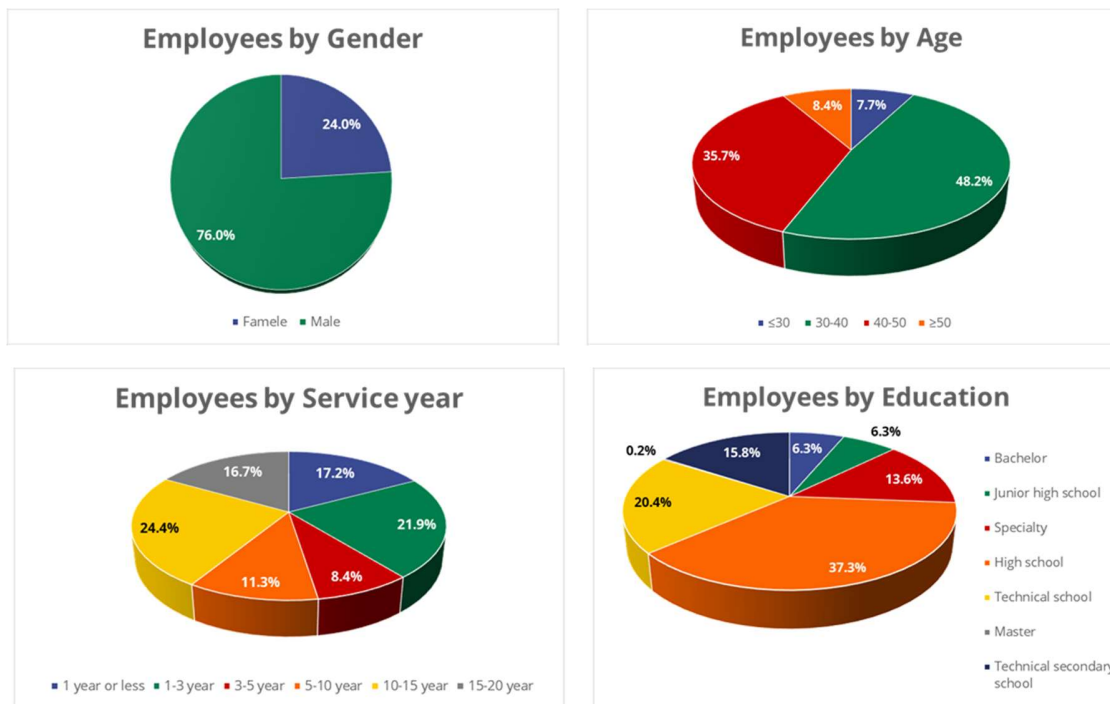
There are 4 step processing for sleeve, extrusion, printing, crease cutting and folder sealing. Sleeve production process can be found from picture below



### 1.2.3 Management organization and staff structure

There are around 450 employees in plant Suzhou. HR and Finance are centralized department.





## 2. Milestone on the Journey of Manufacturing Excellence

As process industrial production, we focus on loss reduction and waste elimination.

The vision of SIG Plant Suzhou is, to be the smartest manufacturing plant with TPM/SES methodology and mindset. SES is short for SIG Excellence System, which is the TPM methodology for SIG.

In VUCA time, we had challenges from external:

- More and more local competitor with lower price merging
- Some orders transferred to sister plant due to COVID-19
- Our customer lot size is reducing, and more tailed-made product.
- Product portfolio is changing, ratio of low-speed, high-waste, difficult-to-process products is increasing.
- Our customer orders are quite uneven and deeply affected by seasonality, especially in Dec.

Internally we had challenges as below:

- Machine worked for over 20 years, feasibility and machine performance are top priority.

- PSU split into 2 sites in 2019, orders start transferring to plant Suzhou2 in 2021
- High changeovers result from volume and customer lot size decrease.
- People capability development due to plant split.
- Product structure is simple due to process constrain.

With the vision and challenge, SIG Plant Suzhou started pillars implementation with TPM/SES tools and methodologies to improve performance in 2020. Overall SES (TPM) history is as below.

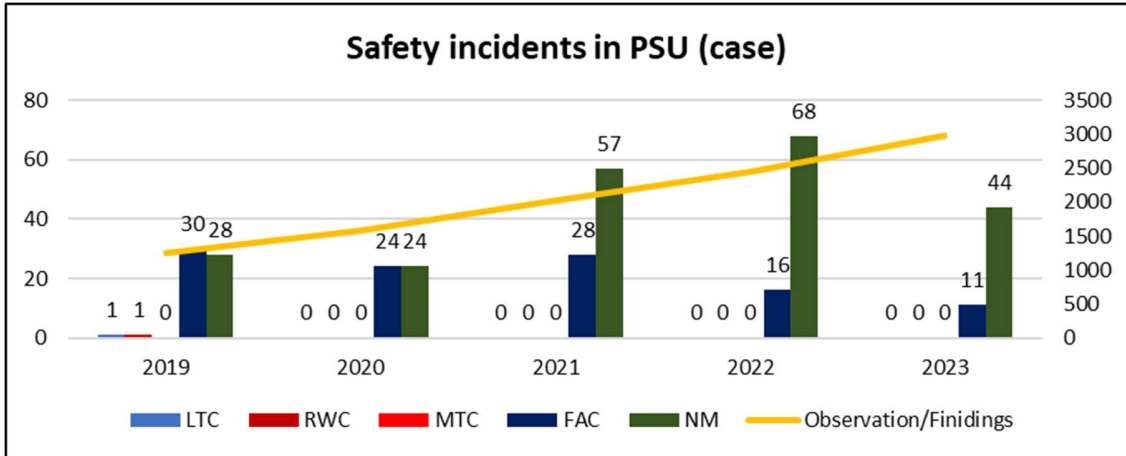
- 2012: Operation Excellence (OPEX) department established.
- 2013: Evolved OPEX to TPM System.
- 2014: Evolved TPM to Continuous Improvement System.
- 2019: Finalized SIG Excellence System and start yearly SES MA by global team.
- 2020: All pillars were in place and started implementation with TPM/SES tools and methodologies.
- 2022: Finished AM step 4 pilot line on time and started JIPM Category B certification application.



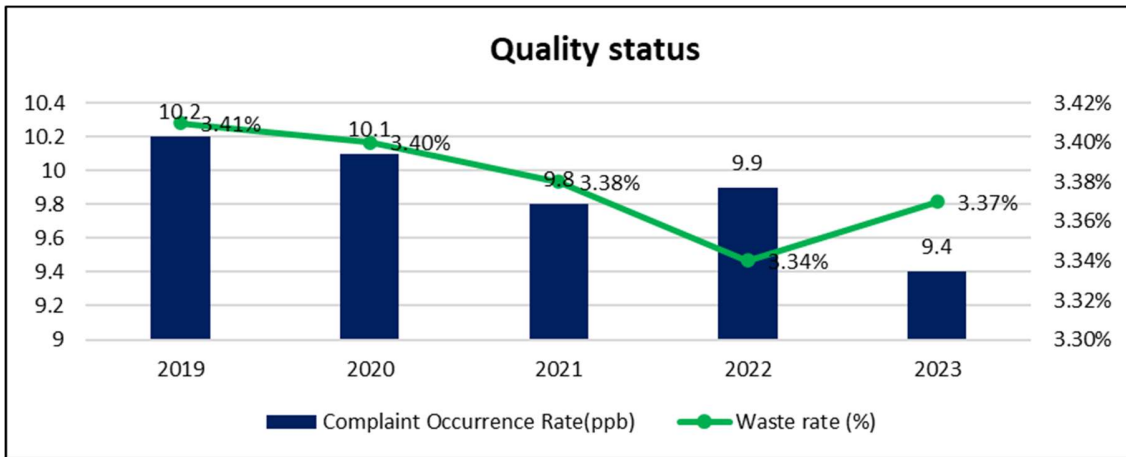
### 3. Benefits Achieved

Since the launch of TPM(SES) management system in 2020, performance continued to improve. Compared with 2019, KPIs have been greatly improved, below are some tangible results in terms of SQDCP.

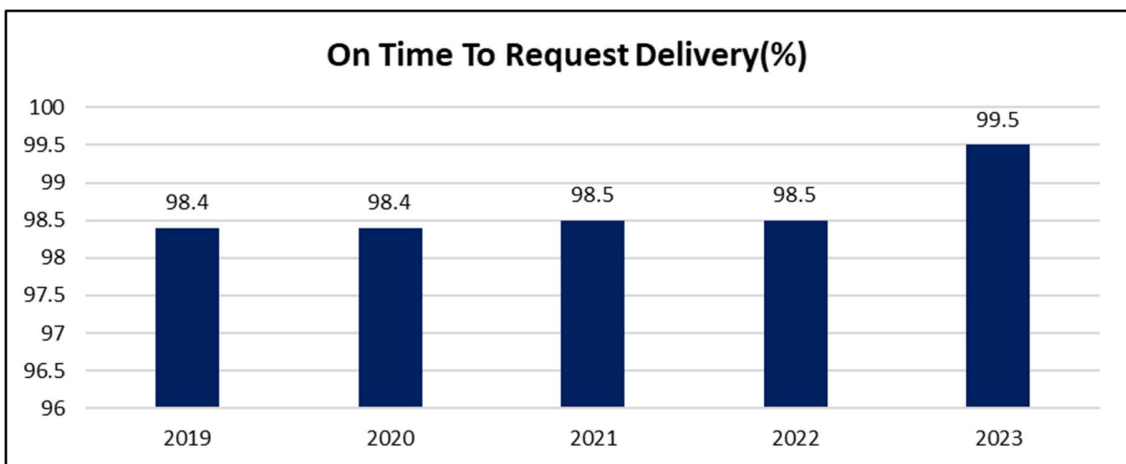
Near Miss or observation finding increased, which also help reduce safety injured or First Aid cases case. Chart below is details.



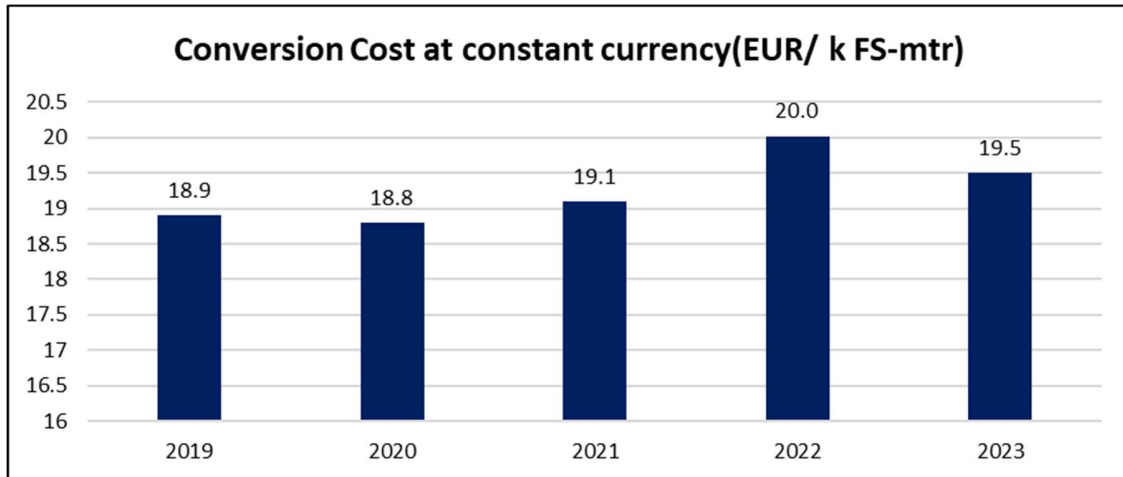
Complaints of recurrence reduced year by year even with higher and higher customer requirement, and waste rate this year is the lowest globally.



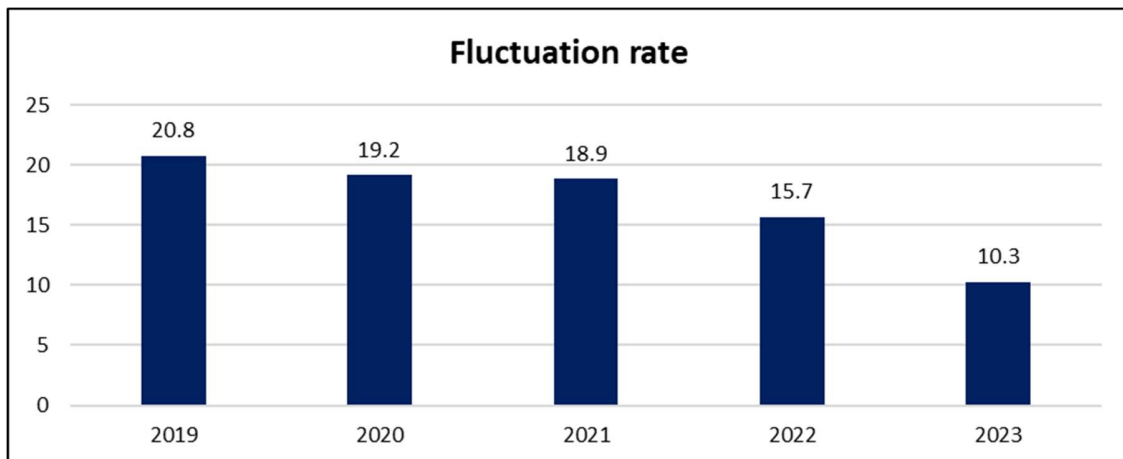
We sustained on time to request delivery performance year over year.



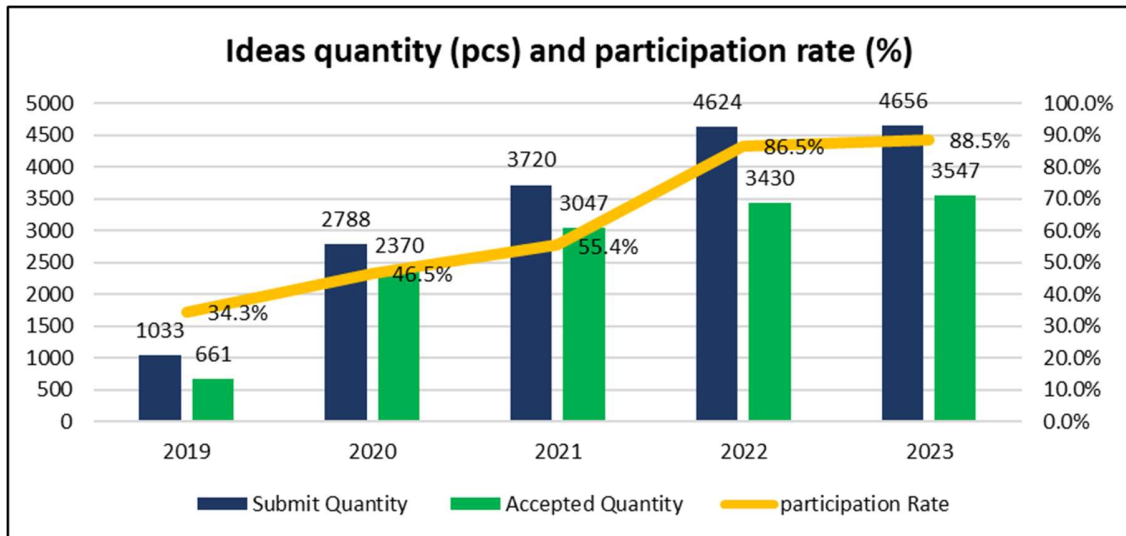
Our Volume got 17% decrease, lot size 55% decreased. But thanks to TPM, our conversion cost got 3.1% increase but still the lowest YTD conversion cost globally. Picture below we had adjusted the tariff to same level for better comparison.



Fluctuation rate continues to decrease since the start of 2020. Now had around 50% reduction.



We also got some intangible result, for example, we have more employees participated into our idea management system. And AM& PM Experts growing up, and skills cumulated during the TPM implementation. The methodology application for example 7 steps of problem solving& 12 steps improvement. It has realized the improvement of employees 'skills and the improvement of employees' working environment.



#### 4. Key of our Manufacturing Excellence

Starting from the very beginning of our TPM/SES journey, we learned a lot. not only from methodology view, but also some of the team and project management, as well as mindset growing up. some key items

1. TPM/SES steering committee for better pillars and department communication and corporation, as well as management involvement
2. All employee, especially the shopfloor employee involvement in TPM/SES activities
3. Zero loss and waste mindset
4. Visual management and Standardization
5. Continuous improvement in daily work

#### 5. TPM Award assessment achievement sheet

Achievement sheet can be found from pictures below. We had improvement on machine performance and our quality, as well as the people development.



## 2023 TPM Award -Achievement Sheet

Company	SIG Combibloc (Suzhou) Co., Ltd
Plant name	Plant Suzhou (PSU)
TPM Slogan/Objectives	To be the leanest smart manufacturing plant in aseptic package area
Year when TPM activity started	2020
Year of benchmarking	2020

Category	Index (Calculation Formula)	Unit	Kick off/TPM Started (2020)	Actual Status 2023
S	Number of work-related accidents requiring days off work	Cases/ year	0	0
S	Number of work-related accidents not requiring days off work	Cases/ year	24	11
P	OEE in EX	%	78.1	79.8
P	Availability	%	87	91.4
P	Performance Rate	%	91	87.8
P	Quality Products Rate	%	99	99.5
P	Number of breakdowns	Breakdowns/ year	1605	972
P	Productivity for main products	Parts/Operator hours	2.6	2.58
P	MTBF	Hour	22.4	45.8
P	MTTR	Hour	0.6	0.74
Q	Number of customer complaints	Number/year	93	88
Q	In-line defect rate (scrap)	%	3.4	3.37
Q	In-line defect rate (rework)	%	2.54	2.17
C	Cost index	Cost/Unit Cost/Kilogram	18.8	21.1
D	Production Lead time	Days	7.1	6.1
D	Delivery performance	%	98.4	99.52
M	Number of Employee Suggestions	Number/year	2370	3547