

2023年度

デミング賞
受賞報告講演要旨

CPRAM Company Limited (Ladkrabang)

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1. Company Background

1.1 Company Profile

CPRAM Co., Ltd. operates under the marketing and distribution business of Charoen Pokphand Group, with CP ALL Public Company Limited as its parent company and major shareholder as shown in Figure 1-1. CPRAM was established on December 12th, 1988, with a registered capital of 600 million baht. CPRAM operations consist of two businesses: the production of ready-to-eat food and bakery products, with seven business units across the country.

CPRAM (LKB) is located at Ladkrabang Industrial estate, address 149 Soi Chalong Krung 31, Lamplatiw, Ladkrabang, Bangkok 10520 Thailand. CPRAM (LKB) has 4 plants that produce room-temperature bakery products, chilled bakery, and frozen bakery products, which have a production capacity of 2.6 million packs per day, supporting the expansion of the 7-Eleven convenience store chain since its first branch opened, and now with more than 13,000 branches nationwide.

CPRAM (LKB) has received ISO standard certification including; ISO9001, 22000, 14001, 45001, 17025, and 22301, and used ISO methodology as one of the management tools for the improvement process.

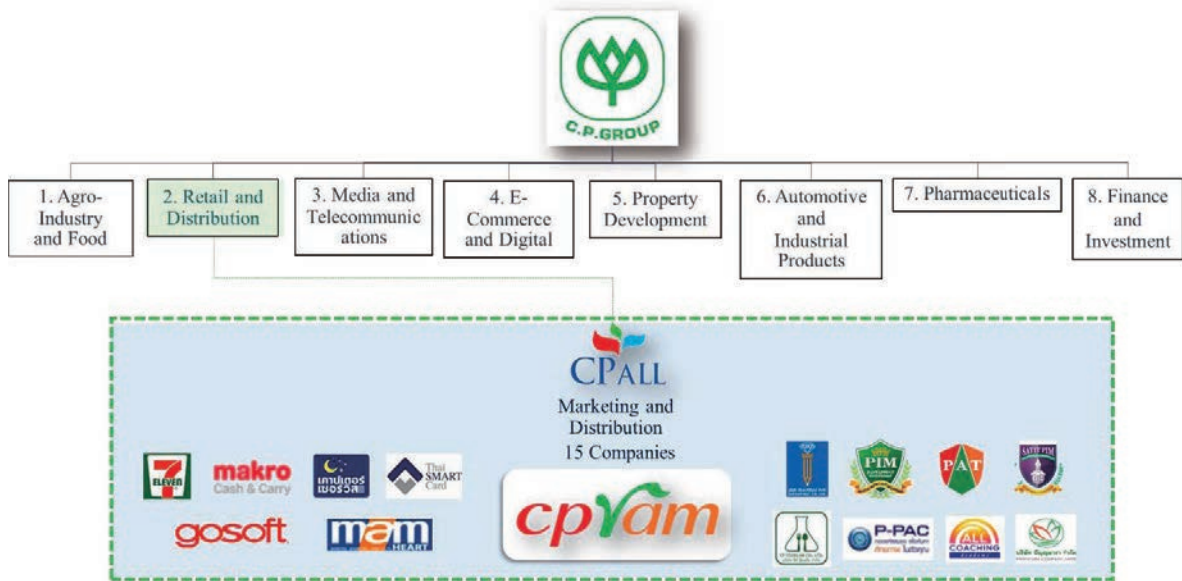


Figure 1-1 Relationship between CPRAM and Charoen Pokphand Group

1.2 Infrastructure

1. 4 Plants; Plant 1 (LKB1) Produces cake, chilled bakery, and frozen bakery with a capacity of 650,000 packs/day, Plant 2 (LKB2) produces bread and pastry with a capacity of 500,000 packs/day, Plant 3 (LKB3) produces sandwich loaf, sandwich with a capacity of 630,000 packs/day, Plant 4 (LKB4) produces cupcake, bread, pastry, frozen bakery with a capacity of 900,000 packs/day.

2. Dispatching Center (DC); DC1 dispatch products from LKB2, LKB3, and DC2 dispatch products from LKB1, and LKB4 with a "Put to light" system that enables accurate and rapid dispatch finish products by store that over 13,000 stores every day

3. The SAP HANA system, which efficiently stores process data across multiple stages of the production and delivery cycle, including order receipt, production planning, production, delivery, payment, and accounting. This system helps ensure that data is organized, accessible, and accurately report, supporting effective decision-making and process improvement.

4. The CPDAS (Center Production Data Acquisition System), which stores production data and enables real-time monitoring and checking of work processes. This system also supports the traceability of production process data via the Datafac Internet website.

5. The Data Center, which serves as a hub for collecting, managing, analyzing, and reporting various data. The center leverages specialized web portals such as Datafac (for factory management) and Datamac (for sales and marketing management) to design programs that help streamline work processes.

6. Quality inspection laboratories are established to ensure the quality of both production processes and products. The company utilizes microbiological and chemical laboratories to monitor the microbial effects of products, equipment, and tools, as well as air and water quality in the production area. For efficient cleaning program monitoring in production lines, use the Adenosine Triphosphate (ATP) testing technique which quickly reduces the risk of food safety.

7. The Innovation Center, located at the Chonburi factory, serves as a hub for learning and sharing knowledge with employees and the wider community.

8. CP Food Lab, CPRAM's partner, conducts fundamental research to apply research findings in collaboration with the factory's product and development team.

CPRAM Business Philosophy/ Culture/ Values

- **Business Philosophy**

Food is essential for life. Quality food means quality life. CPRAM is committed to serving quality Food that is safe, nutritious, and pleasant to consume to make our world vitally healthy.

- **Innovation Culture**

Compelling Vision, Inspirational Leader, Effective Communication, Empowering Climate, People Development & Learning, Goal Oriented, Customer Admired, Stakeholder Engagement

- **C-P-R-A-M Values**

C-Creative, P-Productive, R-Relationship, A-Attitude, M-Moral

- **Vision**

“We provide quality food that brings health and well-being for all”

- **Mission**

1. Build customer trust, confidence, and impression with excellent product and service quality.

2. Build employee engagement by developing knowledge, ability, and quality of life.

3. Conduct business with good governance, environmental management meeting international standards, and participation in improving the quality of life for society and communities.

4. Develop efficient and effective work systems with innovation throughout the supply chain

5. Develop the business for continuous and sustainable growth.

Top executives have restructured the organization to embrace Industry 4.0 technologies, with a particular focus on automation. The company has set a target to further increase the use of robotics and automation in 2022-2025, to enhance its competitiveness and keep pace with the rapidly evolving market. This initiative is aimed at reducing the dependence on labor by exchanging knowledge with domestic and foreign manufacturers.

Business Model

CPRAM (LKB) has developed a collaborative business model with its main raw material suppliers, which include wheat flour, butter, eggs, packaging, and machinery. These partners work together throughout the production process of various bakery products that are distributed through 7-Eleven stores across Thailand to a diverse customer base, with a strong focus on customer satisfaction, as shown in Figure 1-2.

Key Partners	Key Activities	Value Propositions	Customer Relationships	Consumer Segments
- Main raw material supplier (wheat flour, butter, margarine, eggs, sugar, banana, pineapple) - Package supplier - Machine supplier - Gosoft Co., Ltd. takes care of IT systems, River Plus Co., Ltd. dispatching systems	- Rapidly develop new varieties of products - Product freshness management process Key Resources - Machines used to produce a variety of products - Skilled employees	- Variety of products (Bread, Cake, Pastry, Sandwich, Chilled Cake, Frozen Bakery) - Product freshness - Quality and food safety product for customer.	-CRM -Promotion (Consumer) -Call service -Business Review Channels - 7-Eleven - Non 7-Eleven - Online	- Current Consumers - Future Consumers - Past Consumers - Consumer of Competitors
Cost structure - production cost - marketing expenses - Other costs		Revenue Streams - Domestic product sales - Export sales		

Figure 1-2 Business Model

Business process

CPRAM (LKB) manages freshness to meet customer needs by delivering the product to the 7-Eleven store daily. Starting from each 7-Eleven store press the sale order every day, at the time between 5.00 p.m.-6.00 a.m. in the next day. Then sales data were consolidated and delivered to CPRAM (LKB) via SAP. Sales data were delivered to 2 departments as planning department for product orders and raw materials orders and the dispatching center department (DC) for arranging products according to orders by store and each the bakery distribution center (BDC) within 12.00 a.m. for the first route. So all production lines produce products every day for 24 hours, and finished products from 4 Plants were delivered to the dispatching center 13 rounds/day. BDC transport vehicles (around 100-120 Cars) come to pick up products from the dispatching center 18 rounds/24 hours, as shown in Figure 1-3

Business Process Flow

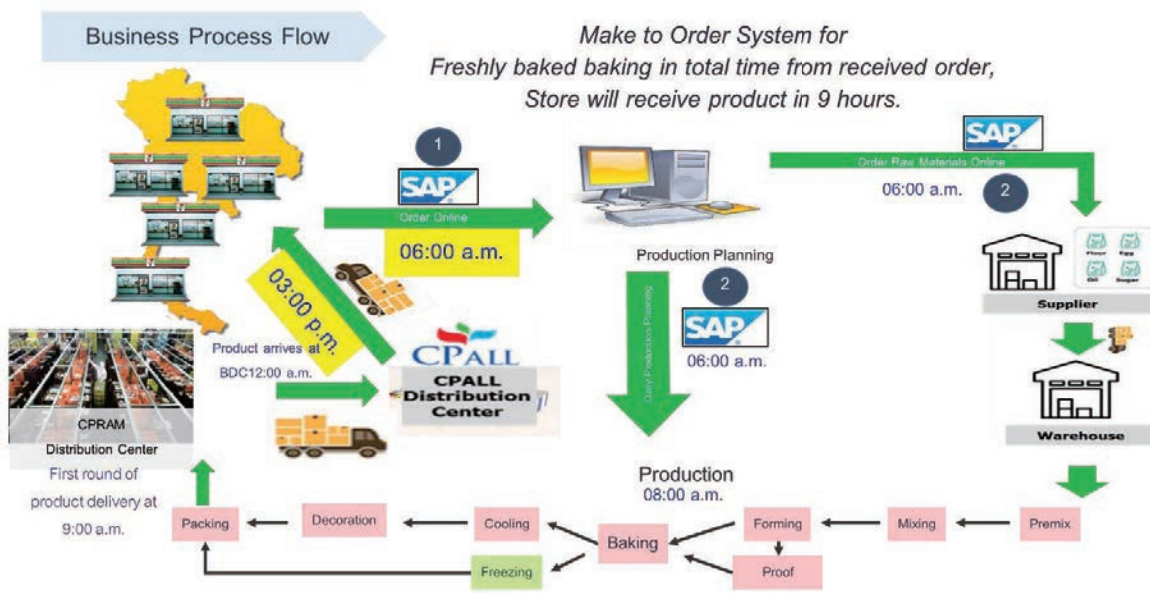


Figure 1-3 Business process

1.3 Market and Customers

CPRAM (LKB) was in the wholesale market and had a 38% market share. 99% of sales were in 7-Eleven. In 2022 the overall bakery market in Thailand grew 17%, the Wholesale market was growth 15%, while CPRAM (LKB) was growth 21% with 7,779 MB, as shown in Figure 1-4.

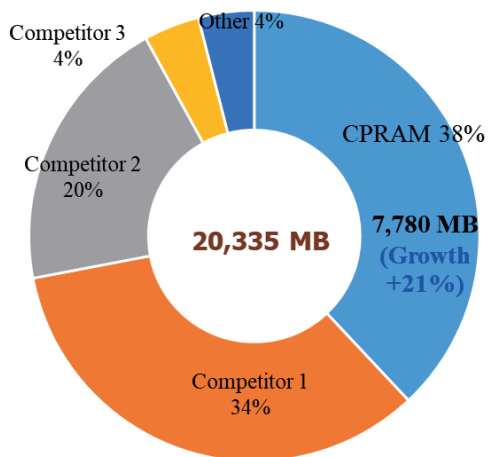


Figure 1-4 Bakery Market Share in 7-Eleven



Figure 1-5 CPRAM's Customer

1.4 Product

CPRAM (LKB) has 6 product categories include, Cake, Bread, Pastries, Sandwiches, Chilled Bakery, and Frozen Bakery under brands (Le Pan, Lady Jane), and 6 OEM (Original Equipment Manufacturing) brands (EZY BAKE, EZY TASTE, EZY SWEET, All Café, KUDSAN, Bellinee's). CPRAM (LKB) delivers products daily to the 7-Eleven store, as shown in Figure 1-6.

		7-Eleven	Non 7-Eleven
Number of Store		13,838 (Update Y2022)	265
Customer (Partner)		 	 
Brand	Owner	 	
	OEM	    	
Existing Market		   	-
New Market		 	 

Figure 1-6 The Company's Bakery Products

1.5 Organization's Core Competencies

1. Ability to develop new varieties of products to meet rapidly changing consumer needs.
2. Ability to manage the production of fresh products daily by using semi-automatic and automatic machines to obtain a wide range of products, and the ability to dispatch finish products by store as ordered in line with the expansion of sales with the "Put to Light" system.

1.6 The Organization

CPRAM's organizational structure has been reorganized into three main divisions to enhance fluidity: Manufacturing and Logistics, Sales and Marketing, and Support and Strategy as shown in Figure 1-7. The majority of our workforce is labor-intensive total employees are 4,840 employees, 80% workers, and 20%, monthly employees.

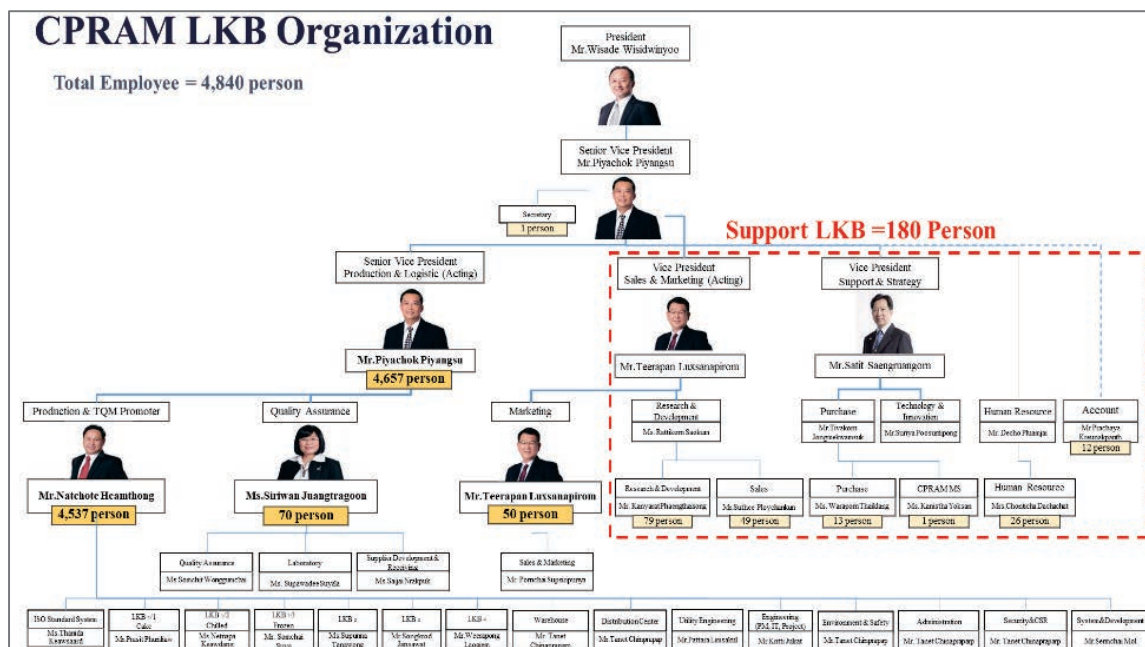


Figure 1-7 CPRAM (LKB) Organizational

1.7 Communication System

CPRAM (LKB) holds communication meetings for all stakeholders regularly, with the frequency, as depicted in Figures 1-8. By priority, the communication system is designed to facilitate two-way communication. For instance, the Senior Vice President (SVP) conducts daily quality, safety, and breakdown meetings, with a focus on quality response and resolving any inconsistencies to ensure customer satisfaction. Additionally, the quality of the product is monitored through monthly eating quality meetings. Business strategies, operations performance, and activities are followed weekly in factory meetings. CPRAM (LKB) strategy is reviewed once a year through the Strategic Management Committee (SMC).

Promotion Vehicle	Content	Review	Owner	Member	Frequency
1. Daily Management	Management	1. Quality, Safety and Breakdown Meeting	SVP	AVP-DM	Daily
	Shop Floor	2. Daily Talk (All Department)	DM	SM-Shop Floor	Daily
2. Policy Management	Performance	1. Factory Meeting	SVP	GM-DM	Week
	Performance Marketing	2. Marketing & sale Meeting	AVP	GM-SM	Week
	Performance MFM	3. Marketing & Factory Meeting	GM	GM-SM	Week
	Performance All BU	4. WMR Meeting	SVP	AVP-AGM	Week
	Performance	5. Cost Saving Committee	SVP	GM	Month
	Performance	6. HR Meeting	GM	GM-Supervisor	Month
	Performance All BU	7. Human Resource Committee	SVP	AVP-SGM	Month
	Performance All BU	8. Robotic and Automation Meeting	SVP	AVP-DM	Month
	Performance All BU	9. Business Improvement Process(BIP)	SVP	AVP-DM	Month
	Performance	10. Safety Committee	SGM	GM-Supervisor	Month
	Performance	11. Quarterly Meeting	President	SVP-SGM	Quarterly
	Performance	12. Strategic Management Committee (SMC)	AVP	AGM-DM	Yearly
3. CFM (Cross Functional Management)	Quality	1. Eating Quality Meeting	SGM	GM-Supervisor	Month
	Quality Management	2. Quality Meeting	SGM (QA)	GM-SM	Month
	Quality All BU	3. TQM Board Meeting	SGM	GM-Supervisor	Month
	Quality with Customer	4. Quality & Customer Meeting	GM & 7-Eleven	DM	Month
	Quality with Customer	5. Store Tour	GM & 7-Eleven	DM	Quarterly
	Quality	6. Management Review	AVP	SGM-DM	Half-Year
	Quality	7. Food Safety Meeting	SGM	AGM-DM	Half-Year
	Quality with Customer	8. Business Review	AVP & 7-Eleven	GM-SM	Yearly
	BCM	9. BCM Meeting	AVP	SGM-DM	Quarterly
	Sustainability	10. Sustainability Committee Meeting	VP	GM-SM	Quarterly
	Quality with Supplier	11. Vender Conference	AVP (Purchase)	Supplier	Yearly

Figure 1-8 Communication Meeting

1.8 Prestige Awards

CPRAM (LKB) has received various awards, As follows: TPM Award 2018 (Excellence Award), the Zero Waste Achievement Award 2019, 3Rs & 3Rs Plus Award (gold level) in 2019, In addition, CPRAM (LKB) has received the Outstanding Workplace Award for Work Safety Received the award for 17 consecutive years since 2007, Labor Relations and Labor Welfare Award for 13 consecutive years since 2011, Certified Carbon Footprint (CFO) award for 2019-2022, The Prime Minister’s Award (Potential) in 2019, CSR-DIW Awards for the year 2021, Green Industry Award Level 4 for the year 2021, and KANO Quality Award 2020 (Gold Award), CSR-DIW continuing award for the year 2022, Certified Zero Waste to Landfill in 2022, The Prime Minister's Industry Award: Quality Management in 2022, Thailand Lean Award 2022 (Silver Award), and IEA-T Sustainable Business Awards 2023.

In addition, CPRAM has applied various series of ISO management systems and has continued to improve until the present, as shown in figure 1-9

1.9 Corporate Social Responsibility (CSR)

Charoen Pokphand Group is committed to 3-Benefit Philosophy, which involves creating benefits for every country it invests in, both for the people and society. CPRAM Co., Ltd. also manages itself under the principle of sustainable



Figure 1-9 Award and Certification

development in all dimensions to achieve the CP Group's sustainability goals by 2030, under the **3H** sustainability strategy, which comprises **Heart** - Living Right, **Health** - Living Well, and **Home** - Living together. This strategy aligns with the United Nations Sustainable Development Goals (SDGs). To achieve its sustainability goals, the CPRAM Sustainability House has been established as a framework for the development and management of sustainability. The framework encompasses all 15 items as shown in Figure 1-9. CPRAM (LKB) was certified CSR-DIW in 2004 and was Re-Certified in 2021-2022 by the Department of Industrial Works. CPRAM (LKB) has defined 7 stakeholders as consumers, customers, employees, shareholders, suppliers, related government, and local communities and set yearly activities and action plans for response to their needs, as shown in Figure 1-10.



Figure 10- Home of Sustainability CPRAM



Figure 1-11 Examples of Activities Done with Stakeholders

2. Business Objectives and Strategies

2.1 Strategic Formulation and Deployment

CPRAM (LKB) policies are distributed starting with policy formulation and strategic planning, which are shown in Figure 2-1.

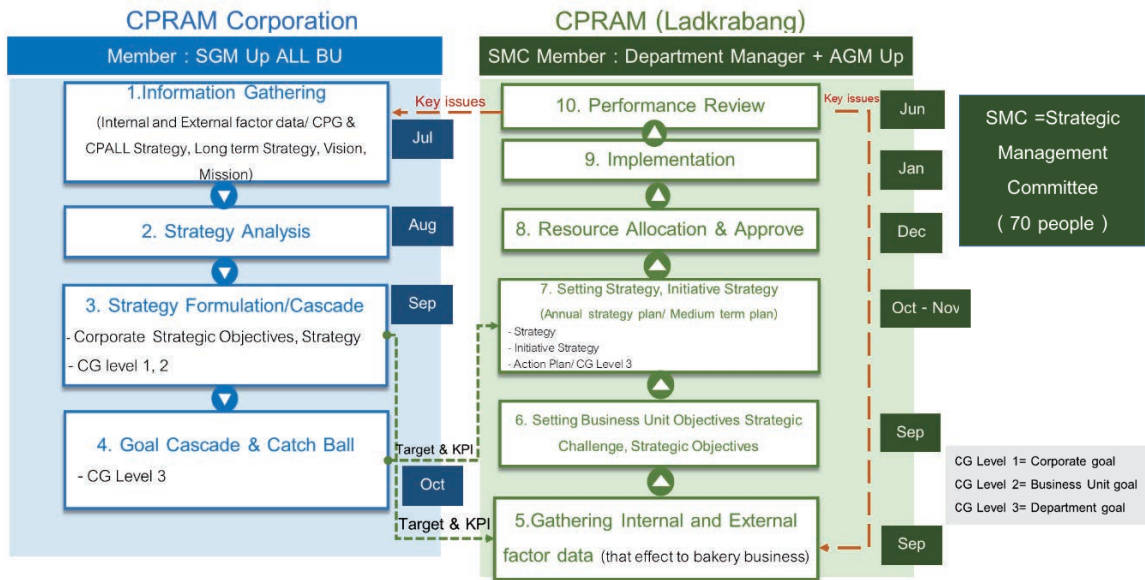


Figure 2-1 CPRAM Strategic Management Process

The strategy is divided into 2 parts: CPRAM Corporation and CPRAM (LKB). The formulation process is as follows:

- 1. Information Gathering:** Information is collected on internal factors such as CPG & CP ALL Strategy, Past Performance, Risk Trends, Stakeholder Requirements, and PESTEL External Factors (Political, Economic, Sociological, Technological, Environment, and Legal).
- 2. Strategy Analysis:** At this stage, a group of executives discuss, and analyze the data in Step 1.
- 3. Strategy Formulation/ Cascade:** The data obtained from analysis and long-term strategy is used to determine the corporate strategic objectives and strategy based on the organization's five missions, as well as CG level 1(Corporate Goal), CG level 2 (Business Unit Goal)
- 4. Goal Cascade & Catch Ball:** The corporate goals are distributed to each department that is owner or supporter by CG level 3 using the Hoshin Deployment Matrix (HDM) tool.
- 5. Gathering Internal and External Factor Data (Effect on Bakery Business):** At this stage, CPRAM (LKB) collects internal and external factors affecting the bakery business and applies the information in Item 3 for preparation strategy in the SMC (Strategic Management Committee) meeting.
- 6. Setting Business Unit Objectives, Strategic Challenge, and Strategic Objectives:** The information in Item 5 is used to review the business unit objectives, strategic challenge, and strategic objectives annually. For business unit objectives normally changed around 3 years, the strategic challenge was changed from the information in item 5 if needed, and normally strategic objectives were changed accordingly business unit objective and strategic challenge. All of the changes are done in the SMC meeting by using a discussion process. For example, the strategic challenges of 2021 and 2023 can be shown in Figure 2-2 and the mapping between Strategic Challenges and Strategic Objectives 2023 can be seen in Table 2-1.
- 7. Setting Strategy and Initiative Strategy:** CPRAM (LKB) uses information in item 4 and CG level 3 from the Catch Ball process in the preparation of the strategy and initiative strategy as shown in Figure 2-3 which shows examples of the preparation of the Strategy and Initiative Strategy in 2022 & 2023. Also, the Action Plan and the KPIs that are the CG Level 3 of each department are reviewed in the SMC meeting by setting the target of CG which must be better than the previous year by using six sigma for target setting based on the previous year. In addition, in this step, we review the alignment of strategy and CG level 2 with initiative strategy and CG level 3 Figure 2-3 can be shown the comparison for alignment of strategy and CG in 2022 and 2023 which review from diagnosis report feedback about the relationship between the policies of each department and the higher-level policies that shown the PDCA cycle.
- 8. Resources Allocation & Approve:** After all departments have come up with an action plan to achieve their CG Level 3, then they prepare the budget consisting of expenditures, machinery, necessary equipment, and manpower rates to obtain executive approval.
- 9. Implementation:** All departments implement an approved action plan.

10. Performance Review: Performance reviews are conducted every six months through the SMC meeting. By review not only KPIs but also review about processes, and problems from staff for improvement.

Since 2017 CPRAM (LKB) managed uncertainty by implementing the business continuity management system (BCM), which aims to enable organizations to continue to operate, despite threats. By focusing on products that customer needs, even in a crisis. Implement example in the COVID-19 Crisis: The result of June-August 2021 did not stop production although reduce capacity of production around 37% and could increase production capacity to 100% within September.

Table 2-1 Mapping between Strategic Challenge and Strategic Objectives 2023

Strategic Challenge of 2023	Strategic Objective 2023
SC1: Recovery after Covid-19 pandemic (Preparation of manpower and production capacity, raw material for supporting sales growth after covid-19 Pandemic.)	SO1, SO3, SO4, SO8
SC2: Threat of New Competitor (Threats from the entry of new competitors to the bakery market.)	SO1, SO2, SO3, SO4, SO8
SC3: Synergy Policy (Policy for business synergy collaboration in affiliate company.)	SO1, SO2, SO3, SO5
SC4: Online Market Trend (Opportunity for expanding business to online market.)	SO1, SO2, SO4
SC5: Technology Trend (New Technology: The occurrence of many new technologies can be used to improve the work system.)	SO2, SO3, SO4, SO6, SO8
SC6: Raw Material Shortages (Raw material shortages & rising in raw material prices due to climate change, COVID-19 Situation and war.)	SO2, SO4, SO5
SC7: Sustainability Policy (CP has policy targeted at sustainability.)	SO5
SC8: Opportunity of AEC Market (7-Eleven stores have expanded to Cambodia and Laos)	SO1, SO2, SO4

Strategic Challenge 2021	Strategic Challenge 2023
SC 1 - Covid-19 pandemic SC 2 - Threat of New Competitor SC 3 - Synergy Policy SC 4 - Online Market Trend SC 5 - Technology Trend SC 6 - Raw Material Shortages SC 7 - Sustainability Policy SC 8 - Opportunity of AEC Market	SC 1 – Recovery after Covid-19 pandemic SC 2 - Threat of New Competitor SC 3 - Synergy Policy SC 4 - Online Market Trend SC 5 - Technology Trend SC 6 - Raw Material Shortages SC 7 - Sustainability Policy SC 8 - Opportunity of AEC Market

Strategic Objective 2021	Strategic Objective 2023
SO 1 – Market and Product Development SO 2 – Enhance Efficiency of New Products Development (NPD) by synergy with customer SO 3 – Upgrade Production to Automation Lines SO 4 – Quality Assurance to Build Customer Confidence SO 5 – Focus on Efficient Resource Usage to Maximize Benefits and Minimize Waste and Pollution SO 6 – Work System Application SO 7 – Focus on Capacity & Capability SO 8 - Increase Capacity for Product Arrangements to Support Increased Sales	SO 1 – High - Value Product and New S-Curve SO 2 – High - Value NPD SO 3 – Flexible & Mass Customize Manufacturing SO 4 – Smart QA SO 5 – Focus on Sustainable Development Goals SO 6 – Advance tracking system for Business SO 7 – Focus on Capability fit for Job SO 8 - Increase Finish goods receiving efficiency

Figure 2-2 Strategic Challenge and Strategic Objective Of the year 2021 and 2023

Mission	Strategic Objective	Strategy	Initiative Strategy	CG Level 2,3 / KPIs	Leader
1. Building customer trust, confidence and impression with excellent product and service quality.	SO1: High - Value Product and New S-Curve.	1. Increasing Sales (new products)	1.1.Premium Product Project · Chilled Bakery · Frozen Bakery (fresh bake) 1.2 All Café Bakery 1.3 Healthier Products Project	1. Chilled Bakery Sales ≥ 610 million THB 2. Frozen Bakery (fresh bake) Sales ≥ 1,060 million THB 3. All Café Sales ≥ 260 million THB 4. No. of Healthy Products ≥ 13 SKUs 5. Net Sales ≥ 7,257 million THB 6. New product sales/ Net sales ≥ 18% 7. % Survive NPD ≥ 31% (BKY) 8. %Contribution margin ≥ 41.6% 9. % Success NPD (BKY) ≥ 57.27%	Pomchai
	SO2 : High - Value NPD.	1. Develop new products according to the timeline of new product plan and marketing strategy.	1.1 Premium Product · Chilled Bakery · Frozen Bakery (fresh bake) 1.2 All Café Bakery 1.3 Healthier Products Project	1. Chilled Bakery Sales ≥ 610 million THB 2. Frozen Bakery (fresh bake) Sales ≥ 1,060 million THB 3. All Café Sales ≥ 260 million THB 4. No. of Healthy Products ≥ 13 SKUs 5. New product sales/ Net sales ≥ 18% 6. Number of new products ≥ 216 SKUs	Kanyarat
		2. Increase product development efficiency.	2.1 Deploy IP pillar (TPM) concept to bread product development 2.2 Product development consultant for new project 2.3 Co-project with suppliers; such as chilled products, new texture bread.	1.New product development lead time ≤ 87 days. 2. Accumulative of R&D specialists ≥ 20 person 3. Number of MP sheets ≥ 100	
	SO3 : Flexible & Mass Customize Manufacturing	1. Implement the cross-functional management system to enable the production of a variety of new products.	1.1 Adjust the production process for cream horn bread from manual to semi automation. 1.2 Develop a new line of chilled sandwich products (LKB3) 1.3 Kaizen option for mass customize cupcake line to fully automation (LKB4) 1.4 Improve Proofer line product from Semi automation (LKB2) to fully automation(LKB4)	1. Fill rate ≥ 99.5% 2. Customer complaints ≤ 0.2 ppm	Prasit/Netnapa Supunna/Wearap Songkrod
		2. Increase efficiency in raw material sourcing.	2.1 Encourage suppliers of peeled banana to develop their own banana growing GAP.		



Mission	Strategic Objective	Strategy	CG Level 2	Initiative Strategy	CG Level 3
1. Building customer trust, confidence and impression with excellent product and service quality.	SO1 : High - Value Product and New S-Curve	1. Building Relationships with Customers (Synergy with CP.ALL)	CSI B2B ≥ 73.66	1.1 Online Marketing with the 7-Eleven platform. 1.2 Expand the market to 7-Eleven stores in foreign AEC countries (Cambodia).	1. CSI B2B ≥ 73.66% 2. Customer satisfaction ≥ 90.00%
	SO2 : High - Value NPD.	1. Develop new products according to the timeline of new product plan and marketing strategy.	1. CSI B2B ≥ 73.66 2. New product sales/Net sales ≥ 12.43 (LKB)	1.1 Premium Product · Chilled Bakery · Frozen Bakery (fresh bake) 1.2 All Café Bakery 1.3 Healthier Products Project	1. Number of New Products ≥ 209 Sku 2. New product development lead time ≤ 74 3. Accumulate of R&D specialist ≥ 20 persons 4. Number of MP sheets ≥ 120 5. Accumulate products from Co-project with supplier ≥ 5
		2. Increase product development efficiency.	1. New product development lead time ≤ 74 days	2.1 Deploy IP pillar (TPM) concept to bread product development 2.2 Product development consultant for new project 2.3 Co-project with suppliers; such as chilled products, new texture bread.	1. Number of New Products ≥ 209 Sku 2. New product development lead time ≤ 74 3. Accumulate of R&D specialist ≥ 20 persons 4. Number of MP sheets ≥ 120 5. Accumulate products from Co-project with supplier ≥ 5
	SO3 : Flexible & Mass Customize Manufacturing	1. Implement the cross-functional management system to enable the production of a variety of new products.	CSI B2B ≥ 73.66	1.1 Increase production efficiency in soft croissant (LKB1) 1.2 Increase efficiency dropping pudding of chilled cake (LKB1) 1.3 Reduce complaints contamination in pudding products (LKB1) 1.4 Project to reduce hair complaints in vanilla roll cake(LKB1) 1.5 Increase Efficiency egg wash spraying machine.(LKB2) 1.6 Adjust the production process of cream horn from manual to semi-automation.(LKB2) 1.7 Reduce complaints Contamination of black marks in Im-Khunn Loaf Product.(LKB2) 1.8 Develop a new line of chilled sandwich products (LKB3) 1.9 Increase production efficiency of sliced bread.(LKB4) 1.10 Reduce complaints of plastic contamination	1. Fill Rate LKB1 ≥ 99.5 2. Fill Rate LKB2 ≥ 99.5 3. Fill Rate LKB3 = 99.5 4. Fill Rate LKB4 = 99.5 5. Customer complaints LKB1 ≤ 0.13 ppm 6. Customer complaints LKB2 ≤ 0.14 ppm 7. Customer complaints LKB3 ≤ 0.08 ppm 8. Customer complaints LKB4 ≤ 0.02 ppm
		2. Increase efficiency in raw material sourcing.	CSI B2B ≥ 73.66	2.1 Encourage suppliers of peeled banana to develop their own banana growing GAP.	

Figure 2-3 the comparison for the alignment of strategy and CG in 2022 and 2023

Summarize of Business Unit Objectives and Strategic Objectives in period 2016-2023 can be shown in Fig. 2-4

Subject	Before 2019	Period 2019 - 2021	Period 2022 onwards
Background	1. Change from large families to smaller families. 2. More of a city society. 3. Consumers don't cook but emphasize easy and convenient meals. 4. 7-11 increases the number of its stores every year. 5. Customer policy is changed to Store Assortment. 6. Implementation of PL LAW is announced. 7. Thai economy has a higher GPP trend. 8. Consumers start to use more social media.	1. Covid-19 Pandemic 2. Thai economy expands at a slow rate. 3. Reduced consumer buying power. 4. Consumers start to live New Normal lifestyles. 5. There is a diversity of consumers' purchasing channels. 6. Natural disasters caused a shortage on some agricultural raw materials.	1. Low economy expansion rate. 2. Most consumers have New Normal behaviors. 3. Consumers are more health conscious. 4. Society fully enters the digital age. 5. There is a labor shortage. 6. There is an ingredient shortage and a higher price trend. 7. The Ukraine-Russia war causes oil prices to rise globally.
Business Unit Objectives	Increase Sales Volume	Increase & Optimized Profitability	Expand to New Market
Strategic Objective (Core Process)	SO1 : Market Penetration SO2 : Developing the New Products for Variety SO3: Increase Production Capacity and Productivity	SO1: Market and Product Development SO2 :Enhance Efficiency of New Products Development (NPD) by synergy with customer SO3 : Upgrade Production to Automation Lines	SO1 :High-Value Product and New S-Curve SO2: High- Value New Product Development SO3 :Flexible and Mass Customized Manufacturing
Strategic Objective (Support Process)	SO4 Quality assurance to Meet Standards. SO5: Elevate Environmental and Safety levels to Meet Accepted International Standard. SO6: Centralize Data Management. SO7: Focus on Capacity. SO8: Increase Product Dispatching System Efficiency.	SO4: Quality Assurance to Build Customer Confidence SO5:Focus on Efficient Resource Usage to Maximize Benefits and Minimize Waste and Pollution SO6 : Work System Application O7 : Focus on Capacity & Capability SO8 Increase Capacity for Product Dispatching to Support Increased Sales	SO4: Smart QA SO5 :Focus on Sustainable Development Goals SO6: Advance Tracking System for Business SO7: Focus on Capability Fit for Job SO8: Increase Finished Goods Receiving Efficiency.




Figure 2-4 Business Unit Objectives and Strategic Objectives of CPRAM (LKB)

3. TQM Promotion

3.1 Development of TQM Framework at CPRAM Co., Ltd. (Ladkrabang)

Top executives have had the policy to apply the principles of the TQM framework to facilitate corporate management since 1997, after Thailand's Tom Yum Kung crisis, starting with strategic management using Hoshin Deployment, implementing the concepts of the first pillars such as Market-in, PDCA, and Standardization, etc., by promoted through policy management, cross-functional management and daily management to achieve business goals such as finding real consumer needs with customers (Market-In), etc. In addition, important quality improvement activities are promoted through bottom up activity, which is a QCC activity called Ant mission.

CPRAM (LKB) adopted Kano's House concept to CPRAM Ladkrabang's House for driving business as shown in Figure 3.1

CPRAM (LKB) used Food Safety System, 7s, CPRAM value, innovation culture, baking science & technology for management foundation with 3 pillars (1. Principles/ concept, 2. Method/Technique, and 3. Promotion Vehicle) and cultivated employee consciousness throughout the organization, especially Market-in/ Next process is customer, which reduces working in a silo and creates accountability with process oriented. As well as reducing conflicts circumstances by using Fact & Data, promoting working with PDCA and making standard work process with prevention. For method/ technique pillar used for improving quality by using tools selected from TQM, TPM, and Lean that suit each task such as 7 QC tools, why-why analysis etc. For promotion vehicle, (Policy Management, Daily management, Cross Functional Management, and Bottom-up Activities) to be used as the core for driving the organization's management.

CPRAM (LKB) has done business for vision, mission and stakeholder satisfaction. With the bakery business changing relatively quickly, it's like a fashion item. Popularity and flavors are emotional, so we have to keep launching new products to meet the needs of our customers.

CPRAM (LKB) has established a TQM committee to drive TQM operations consistently and across the organization. Announcing the appointment of a TQM working group, with responsible persons for managing each issue distributed to every BU. Action plans are reviewed every month to ensure that the working plan met the target and that each BU will continue to work according to the action plan. as shown in Figure 3.2

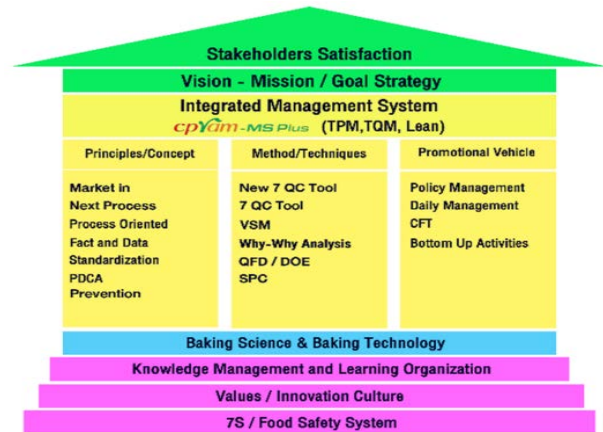


Figure 3-1 CPRAM Ladkrabang's House

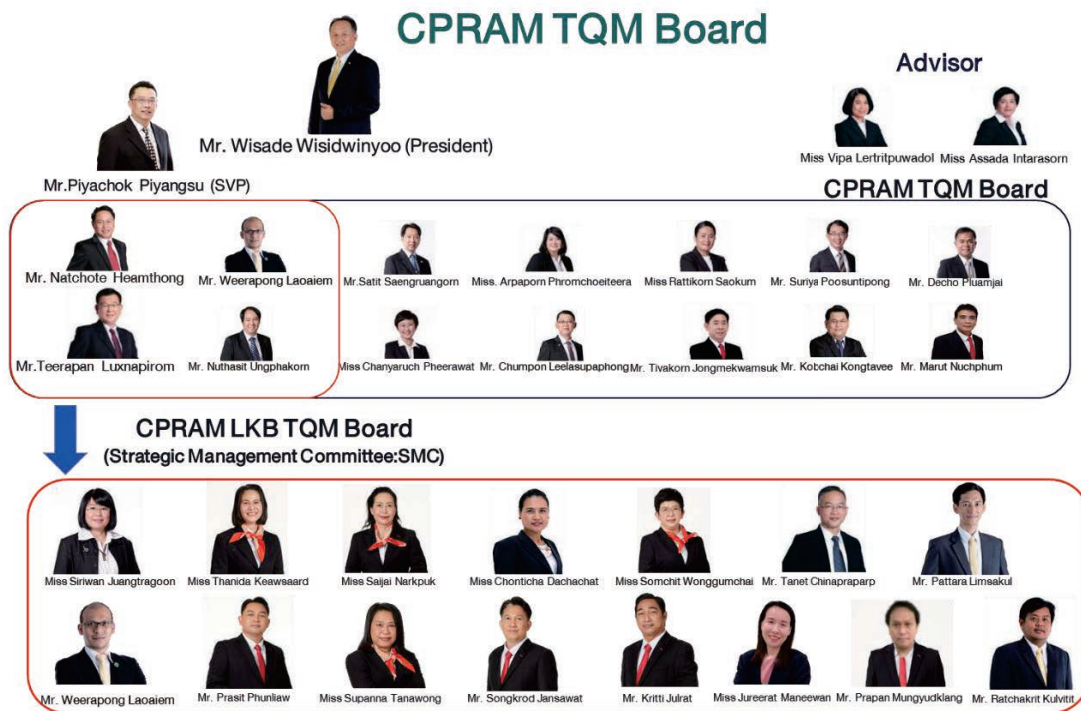


Figure 3-2 CPRAM TQM Promotion

3.2 TQM Promotional Activities

Figure 3.3 Relationship Management System start form after formulating the business unit objective, strategic objective, and strategy, the SMC set initiative strategies that support the strategy. Strategic formulation process is part of policy management which is divided into cross-functional management and functional management with Coporate goals (CG level 3). Normally an initiative strategy that achieves the target owner will add work process to procedure or work instruction in ISO standard. Daily management in CPRAM (LKB) runs through the procedure, and work instruction aligns with ISO standards (ISO9001, 22000, 14001, 45001, 50001, 17025, 22301). Which has improved processes through internal audits, and external audits and motivated all levels of employees to improve processes or products and to reduce the chronic problem through bottom-up activities. Bottom-up activity CPRAM (LKB) define as 3 types such as small group activity (1) improve Q, Q, C, D, S, M, E, E by themselves solve the chronic problems which achieved target within 1 year. By QCC project that calls Ant mission (2) and CFT Project (3) solve the another chronic problems (which achieved target more than 1 year) or need budget they will up level to policy management. All of the improvement processes, and products will update in the work instructions, procedure, and retaining employees. CPRAM (LKB) used the competition both internal & external for motivation activities to support the PDCA cycle for innovation example Kaizen competition, CPRAM award, 5S award, process excellent award, president award, etc.

Cross-Functional management normally team leader is set by an SMC meeting or process owner and a working group will assess the feasibility of the project provide knowledge or find relevant basic knowledge sources for achieved KPIs. The project is reviewed throughout its implementation in various forums and achievement is measured against project KPIs.

After CPRAM (LKB) received the feedback report from Juse, each department reviewed and improved their work instruction by adding their workflow with a clear control point for monitoring their own daily management and adding how to action in case they found abnormal results.

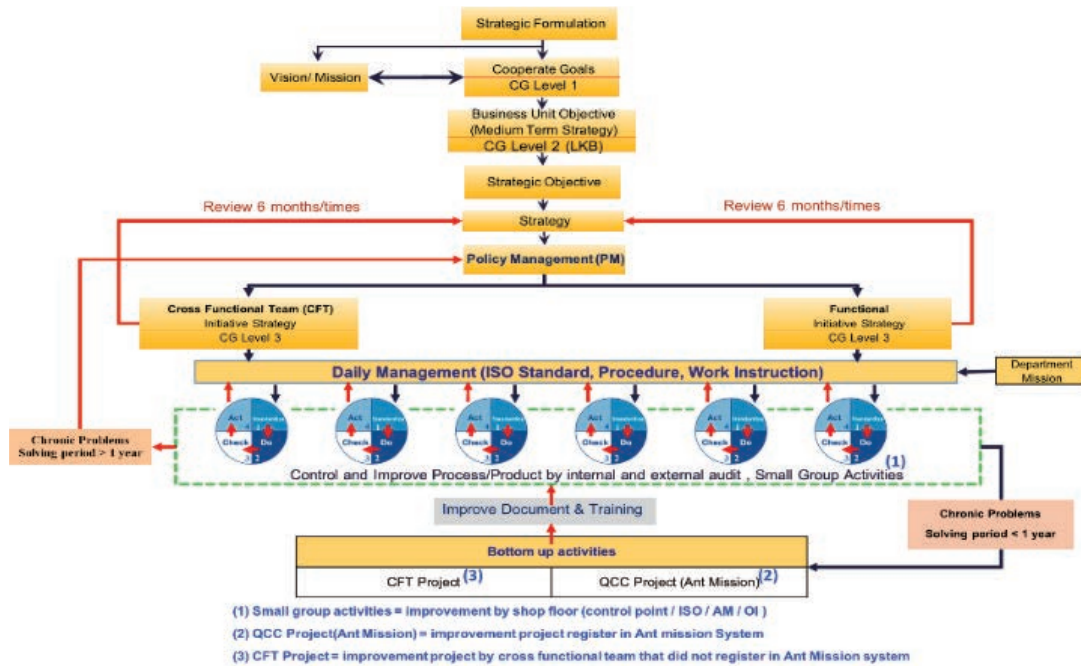


Figure 3-3 Relationship Management System

3.3 Bottom-Up Activities

Management team that drives small group activity motivates and encourages employees at all levels to continuously improve their work in quality and productivity on the basis of QC Stories (Ant Mission activities), starting with the announcement of the establishment of policies and guidelines for the implementation of the QCC subgroup by setting KPIs for each party and measuring activities. KAIZEN activities began in 2016 to allow employees to continuously suggest good ideas or improve their work on their own. But the majority of employees offer suggestions but do not participate in finding solutions. In 2017, Management team that drives small group activity set up the number of Kaizen in CG Level 3 to encourage supervisors to teach and encourage them to engage in Kaizen activities and created incentives through rewards for every idea from 20-1,000 baht. In additional, Management team that drives small group activity created competition stage in each BU for stimulating the improvement activity atmosphere to improve. These resulted in the number of kaizen projects increasing.

In 2023, the SGA Ex Awards was set for competition for all bottom-up activities QCC project (Ant Mission), Kaizen, 7S in each BU then the top 3 of each BU winner have to competition in CPRAM Awards which is the way for quick knowledge sharing and promote innovation effectively.

3.4 TQM Education and Training

Since 1998 TQM concept has been the first training across the organization, followed by QC Tool, and the new 7 QC Tools, about technical training such as baking science and baking technology mainly trained for factory supervisors. In 2014, after applying TPM R&D department was trained “IP Pillar” for an effective new product development process. Some of the supervisors in both the engineering and production departments were trained in “PM and AM Pillar” to reduce machine breakdown and loss in the production line and why-why analysis was trained in some supervisors for root cause analysis. OI pillar was trained in the warehouse department which applied 7S together for efficient work process improvement. In 2014 some of the production managers were trained Lean management system and used the value stream mapping concept for designing automation plants (LKB3, 4). In 2022, the marketing department and R&D department were trained by QFD and DOE to improve the new product development process.

However, CPRAM (LKB) found that in the production line, people did not strongly use statistics for process control together with after CPRAM (LKB) received the feedback report, CPRAM (LKB) reviewed and re-categorized the

training curriculum that supports TQM, QC way, and innovation therefore 2023 “process control” was trained in many supervisors and some managers in many departments.

3.5 Innovation mechanism

To support innovation capability top executive set 8 innovation cultures for fostering employee behavior and set an innovation tree for categorizing CPRAM’s innovation. CPRAM Innovation tree as shown in Figure 3-4 and CPRAM innovation mechanism as shown in Figure 3-5 which starts from

1. Idea generation comes from 1) Source of information, external organization (such as New technology, Overseas visit, etc.), past performance, strategy/ policy, customer (customer complaint, survey) 2) Market research 3) People both from Top management and employee (personal & group CFT)
2. Feasibility Study by 4 criteria; value, budget, duration, possibility
3. Commercialization has 7 activities; execution plan, project committee, change management, communication plan, project implementation, project follow-up, and project learning. The team does this through the PDCA concept and learns together till commercialization.
4. Promotion. To motivate employees by 1) encouraging innovation submission in many ways 2) competition both internal (CPRAM, CP ALL Group, CP Group) and external organization 3) supporting to patent register for new things 4) registering innovators & reward; every year top executive will give a certificate for an innovator in honor in innovator ceremony and innovator will receive an extra salary.
5. Review process and result.
6. Improvement activities by reviewing training programs, competition criteria, and innovator register criteria



Figure 3 - 4 CPRAM Innovation tree

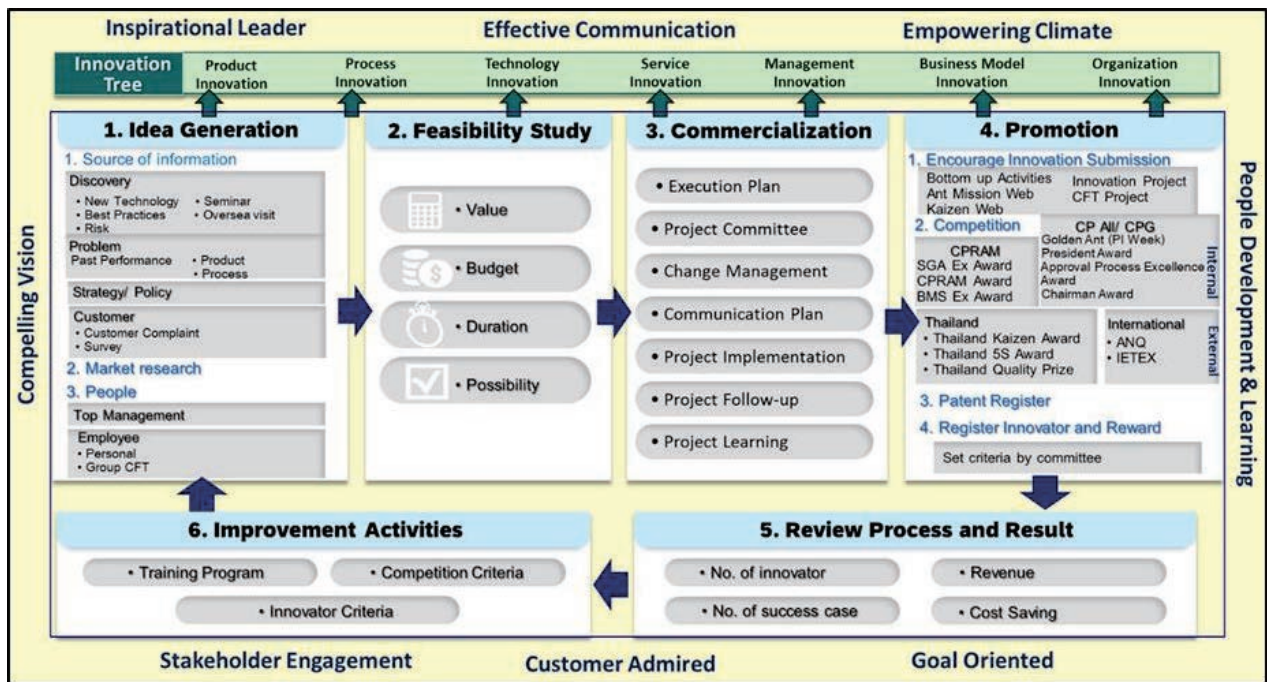


Figure 3 - 5 Mechanisms for fostering an Innovation Culture to promote Innovation Capability

3.6 Knowledge Management

Organization-Knowledge management system as shown in Figure 3.5 which starts from 1) Define needed knowledge; 16 job families, Fundamental technology and knowledge for bakery product business 2) Gathering & Storing Knowledge (organization intranet); 2.1) external; News journal research document, textbook, etc. 2.2) Internal; work system & work process (ISO Document), key learning from working activity (MP sheet), Improvement project from bottom up activities (QCC, Kaizen, Suggestion), CFT project, etc. 3) Show & Share; in many ways such as meeting, organization intranet, internal contest, external contest. 4) Promote to use of all knowledge. 5) Review & improve the KM system

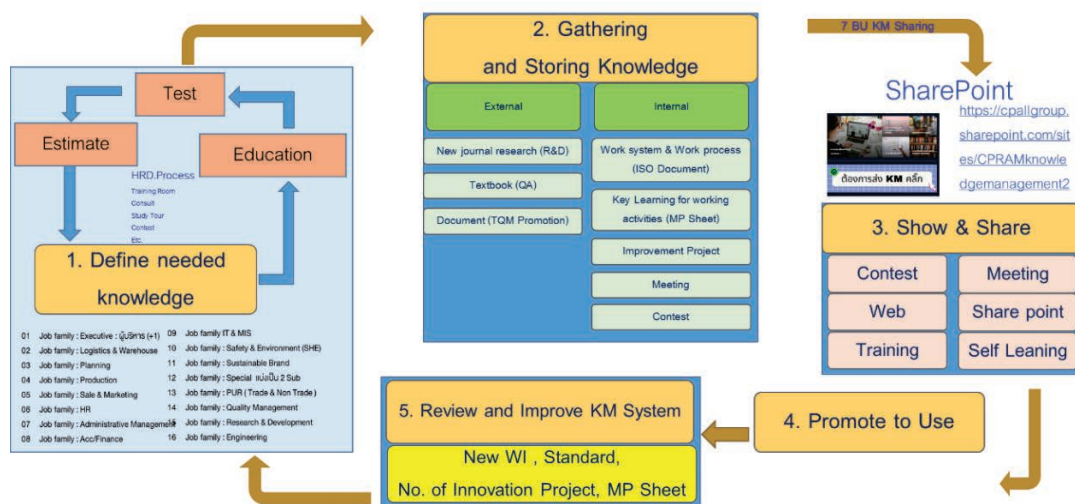


Figure 3-6 Knowledge Management

3.7 Overall Effects Tangible Effects

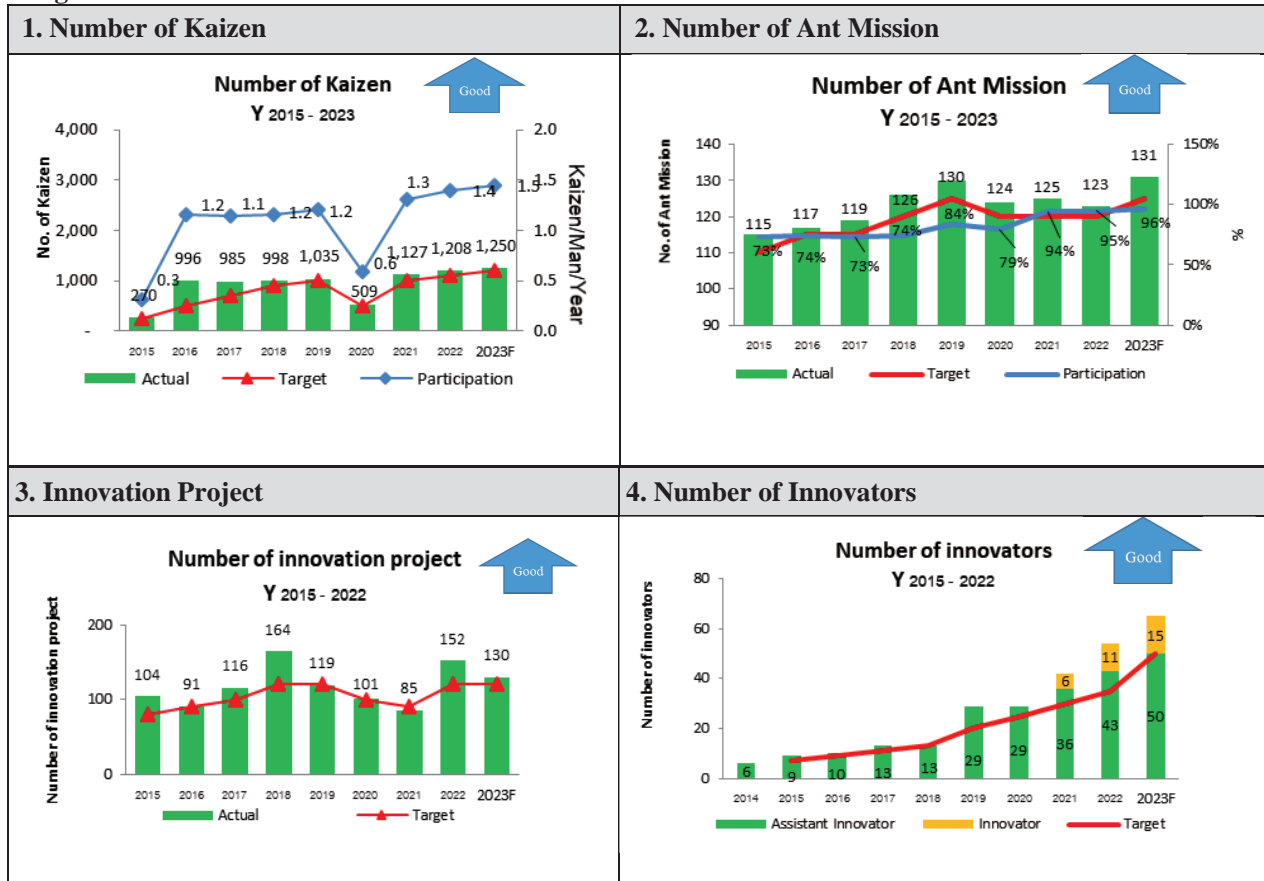


Figure 3.7 Overall Tangible Effects

Intangible Effects

1. Employees take pride in their admired work and awards.
2. Employees in each division have better relationships for having participated in the activities taking place at the Cross-Functional Team.
3. Factory people are rapidly improving their work by sharing information among themselves.

3.9 Future Plan

1. Provide education and promote the adoption of big data/AI (artificial intelligence) systems in both factories and support department.
2. Provide additional knowledge of QFD DOE SPC to be used in work such as production, QC, QA, R&D, etc.
3. To create a KM system to bring knowledge to each family to use more.
4. Review the criteria of the innovator and innovation course.

4. Establishment & Practice of Management System

4.1 Customer Response

4.1.1 Implementation Status of Focused Activity

Before 2019: Marketing Strategic Objectives – Market Penetration

CPALL had an expansion store plan 10% per year, and changed the product order system from CPRAM's sales department to the store manager to order products every day for accurate product amount suit for each store and desired CPRAM to deliver the product at their distribution center (BDC) every day.

For penetrate market, value -for-money products and high value products have been created for covering all customer segments. These strategies resulted in the net sales increase and could create the new products that define new S curve.

In addition, the marketing department tried to create brand for sustainability through various online channels, resulting in the number of fan page growing every year. Also, since CPALL needs CPRAM delivered every day at every store, a good relationship has been built with a strategy to create sales together by having CPRAM's sales team came to help the 7-Eleven store manager order product. Resulting in higher customer satisfaction scores than competitors around 20% in every year.

During the 2019-2021 period: Marketing Strategic Objectives – Market and Product Development

During Covid-19 crisis, purchasing power definitely decreased. There were curfew period, and consumer behavior changed for shopping online.

Therefore, the marketing department developed market and product for high potential customer segment; chilled and frozen bakery, and synergy with 7-Eleven sale product with 7-eleven platform online. In the Covid-19 pandemic situation that lockdowns country and lower buying power affect sales dramatically dropped down. CPRAM (LKB) needed to make a contingency plan "Im-Khum project" for a big size but reasonable price product.

In addition, there is an online marketing project to respond to customers who prefer to buy product online, resulting in sale growing even in the Covid-19 pandemic. In this period, creating brand sustainability is done by creating content that meets the target group, causing the number of fan page to increase even more. There is also cooperation with CPALL by scrum collaboration to launch new product faster. As a result, we still receive more satisfaction than our competition.

Period 2022 onwards: Marketing Strategic Objectives – High -Value Product and New S-Curve

The GDP was projected to expand, but at a lower rate than pre-Covid-19 pandemic conditions at 3.7%. In general, inflation has a rising trend. The Ukraine-Russia War had also resulted in rising raw material prices. Oil prices are higher and consumer behavior continues to favor online purchases, personalized products, and greater interest in health products. The bakery market in convenience stores started to have new traders come in. Therefore, marketing department focus on creating new markets with high potential customer segmentation products and more cooperate with strategic customer.

4.1.2 Effects

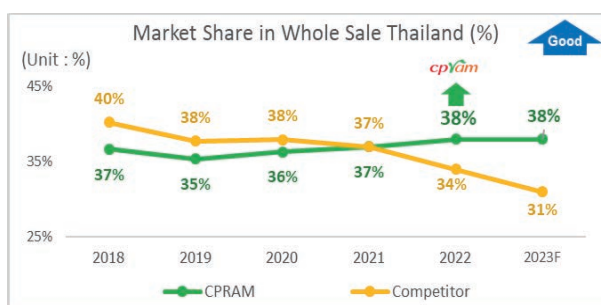


Figure 4.1 – 1 Market Share in Whole Sale in Thailand



Figure 4.1 – 2 Number of Facebook Fan Page

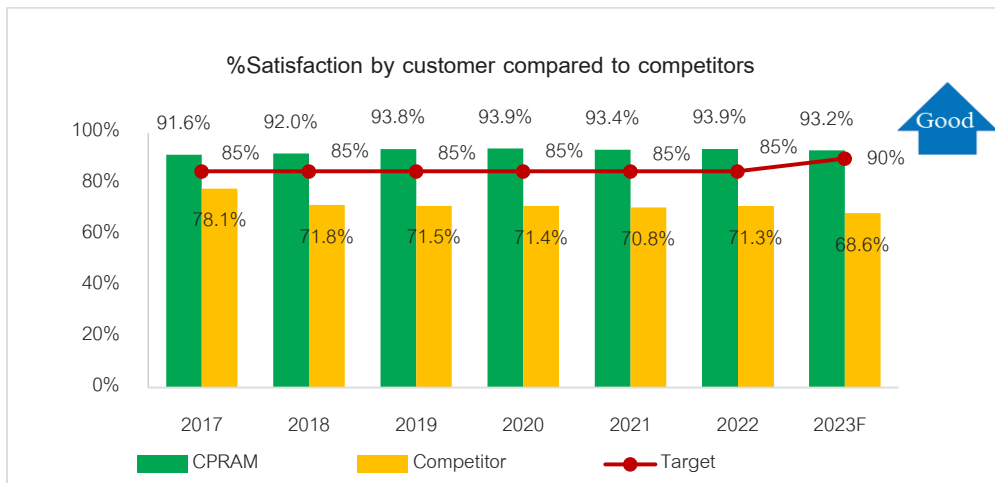


Figure 4.1 – 3 % Satisfaction by Customer Compared to Competitors

4.1.3 Future plan

1. Continue develop high premium product
2. Social Network Management: Manage brands with a team of experts. Create content through online media to stand out and engage the target audience. Expand new customers. Conduct marketing through digital media. Promote brands and products. Increase sales using various digital media strategies, such as improving social media to enable easier searching, as well as selling products and services online to meet new normal lifestyles.

4.2 Enhance New Product Development

4.2.1 Implementation Status of Focused Activity

Before 2019: New Product Development Strategic Objectives – Developing the new product for variety

CPRAM (LKB) constructed 2 new plants; LKB3 and LKB4 to be automatic in production and new markets are created. Therefore, we have to adjust existing product recipes to suit with automatic production line to support value -for-money products project. Also, we developed chilled cake for 7 days by co-project with supplier to support high value products project.

In addition, the research and development department tried to increase product development efficiency by 1) Applied TQM Concept 2) Japanese and Thai Consultants to co- develop product recipe and automatic production process for sandwich.3) Co-project with partnership supplier for bread product. These strategies resulted in **the number of co-projects increase every year and lead time for product development decreases**. In terms of raw materials, with global climate change, natural disasters occurred, resulting in a shortage of raw materials in some parts which required more experimentation with alternative raw materials or replacing existing production sources.

During the 2019-2021 period: New Product Development Strategic Objectives – Enhanced Efficiency of New Product Development (NPD) by Synergy with Customer

Due to the Covid-19 infection, there was an economic recession at -6.1% in 2020, and consumer purchasing power declined. Therefore, we collaborated with customers (CPALL) to conduct synergy projects to develop quality products that are cost-effective, high-value, and fresh which called Im-Khum Bakery by using the Scrum Process to reduce lead time for product development.

Additionally, consumer behavior changed. The online market grew, we developed products to support this new market. Also, we applied tools for new products development process such as Quality Function Deployment (QFD) and Failure Mode and Effects Analysis (FMEA) to reduce development time and increase the accuracy of new product development.

Period 2022 onwards: New Product Development Strategic Objectives – High-Value New Product Development

In this period, consumers are diverse and have different need and some customer require better quality of life. Therefore, premium product project is created 1) chilled bakery premium 2) Frozen Bakery by developing the frozen products from semi-automation to automation. These projects make sales in new market segment higher.

In addition, the number of coffee corners in 7-11 stores has greatly increased. Therefore, it is an opportunity to develop bakery products that are eaten with coffee. The research and development department tried

to develop to support this market. Furthermore, we develop the healthier bakery products such as low-fat, low-sugar products, including plant-based and vegetarian bakery products to support a greater interest in health.

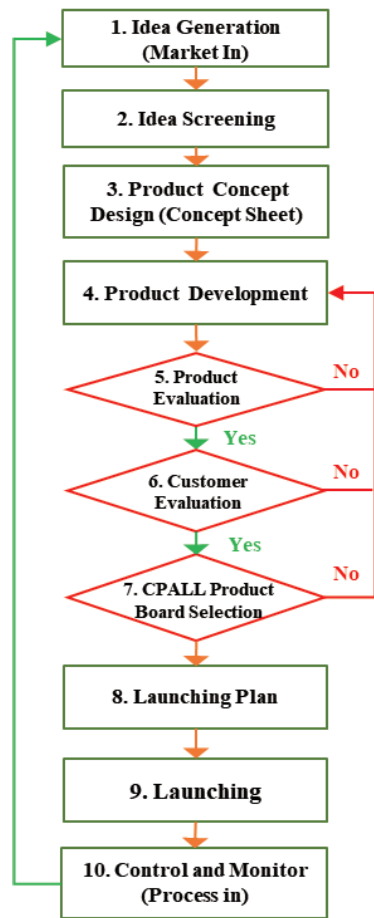


Figure 4.2 – 1 New Product Development System

4.2.2 Effects



Fig 4.2- 2 Number of New Products

4.2.3 Future Plan

- 1) Develop new products support new markets.
- 2) Continuously deploy IP Pillar (TPM) to product development process.
- 3) Consultants in both Thai and Japanese to enhance product development efficiency.
- 4) Develop substitute raw materials that may be shortage: Modify Starch, Dairy and Non-Dairy whipping cream.

4.3 Improve Production Efficiency

4.3.1 Implementation Status of Focused Activity

Before 2019: Production Strategic Objectives – Increase production capacity and productivity

The market sales situation had increased every year and the trend continued to grow. In the early period, the production capacity of the 2 plants was almost full capacity. The production systems include manual and semi-automation systems that relied mainly on labor intensive, resulting in rather low productivity and a rather high rejection which caused the profit margin to be lower. Therefore, we have a strategy to increase efficiency and production capacity by building plant LKB3 and LKB4 using the Lean concept to be the automatic lines such as developing a fully automatic line for new products.

In addition, we improve plant LKB1 and LKB2 to be semi automation for producing variety of products by creating and developing the forming machine. Also, we reduce rejection by focusing on product groups, resulting in increased productivity and decreased rejection.

During the 2019-2021 period: Production Strategic Objectives – Upgrade Production to Automation Lines

The COVID-19 situation outbreak in employee living quarters. Some of the employees were infected with the virus, there was a partial reduction in production capacity due to lack of labor. The Bubble measure was implemented on an employee in work sites, therefore resulting in making it possible to deliver the best-selling products to 7-Eleven stores.

In addition, during that time it helped society to encourage customers to good value for money and delicious products with the “Im-Khum” Project in all plants. In addition, the impact of the COVID-19 situation resulted in workers returning to other provinces, causing a shortage of manual labor. As a result, the company developed machinery and equipment to replace the labor in the production line. All focus activities make sales and profits tend to increase.

Period 2022 onwards: Production Strategic Objectives – Flexible & Mass Customized Manufacturing

There are many production technologies that are easily purchased to help with production. Therefore, we applied to adopt robotic systems and provided more machine options for mass customized production.

During this period, the price of raw material increased. Therefore, we apply TPM and Lean to reduce losses and waste in the process, resulting in the reject will decrease. In the future, the PMS system, enabling real time reporting and analyzing the data to reduce the loss from the process. Furthermore, for supporting the marketing that focuses on building potential segments and high –value products, we try to develop an automatic packing machine, improve the production process to semi- automation in some area.

In order to consumers receive fresh products every day, 7-11 store must be able to order every product every day. Our Production system can deliver products within 9 hours, so we do with a flexible production management system.

After receiving a sales order from sales administration, the planning department makes

- 1) Production planning by the plant by SKUs and by delivery round to dispatching process.
- 2) Raw material planning to purchase department for prescribed volume and delivery time to all suppliers.
- 3) Manpower allocation for each production line and dispatching department.

4.3.2 Effects

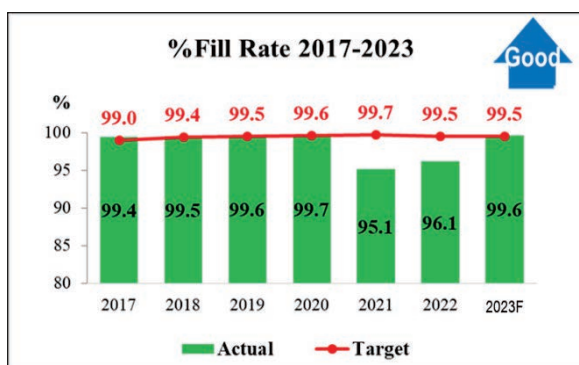


Figure 4.3-1 % Fill Rate 2017-2023

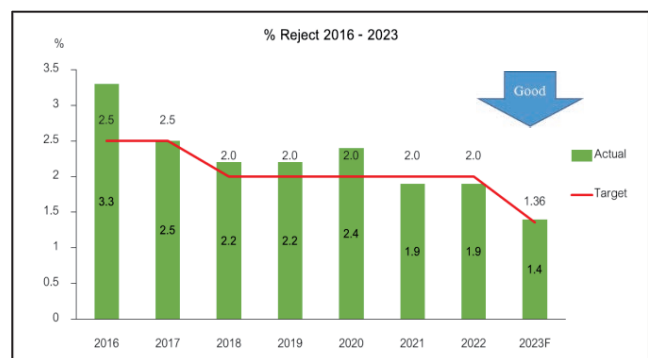


Figure 4.3-2 %Reject 2016-2023

4.3.3 Future Plan

- 1) Improve the adoption of additional robotics and automation in the production processes.
- 2) Develop the skills of employees at core processing stations, technicians for controlling the automation machines and analytical knowledge to improve work to reduce losses in processes.

5.1 Strategic QA Management

5.1.1 Implementation Status of Focused Activity

Before 2019: Quality Assurance Strategic Objectives – Quality Assurance to Meet Standards

During this period, the Product Liability Law was announced in which consumers began to use social media more. Therefore, the quality assurance department created a system for auditing suppliers, making quality problems from suppliers more continuously decreasing. Food safety team for each product group to be appointed for analysis risk of product and process and setting the control measure for prevention. Furthermore, checklist inspector team to be appointed for auditing process line more over year by year process owner improved their control measure resulting in a higher quality audit score. A deep learning project has been created for new products to confirm the shelf life of products in the bread filling group resulting in no complaint about deterioration.

During the 2019-2021 period: Quality Assurance Strategic Objectives – Quality Assurance to Build Consumer Confidence

During this time, the Covid pandemic has resulted in high turnover and lacked of worker, which may result in high quality control errors. Therefore, a supplier development project has been established, resulting in the number of green card suppliers tending to increase every year.

In addition, we have created the product quality inspection system, such as a filling inspection machine in the pocket sandwich that can automatically reject sandwich products that do not have filling, resulting in zero no filling product complaints. We also have used 5-head thermometer to validate the baking process, ensuring a more confident sterilization process.

Furthermore, we used FMEA to assess the risk of process and created standard of new product quality profile by scientific instrument, such as electronic nose machine (E-nose) for smell analysis. Method for test testing shelf life in accelerated conditions have been developed. We have expanded the eating quality project to all product groups, making the sensory test scores of the products more likely to increase and create a project to reduce complaints that are the top 3, resulting in all 3 complaints tending to decrease every year.

Period 2022 onwards: Quality Assurance Strategic Objectives – Smart QA

During this period, the bakery market has become more competitive. There are still a lot of new product launches and consumers have higher quality expectations. Therefore, we had created an All Delica Alliance project by sharing experience in every aspect to strategic partner, we had developed integrated inspection system into the checklist inspector project, making the quality score results in every aspect meet the target.

In addition, we have an idea to develop a new product risk assessment program to reduce human error and expand the deep learning project to the other products, including the development of a quality assurance database by creating the E-library for QA that covers all 4 aspects: Part of KM, Research, Project, Text book.

5.1.2 Effects



Figure 5.1-1 Customer Complaint

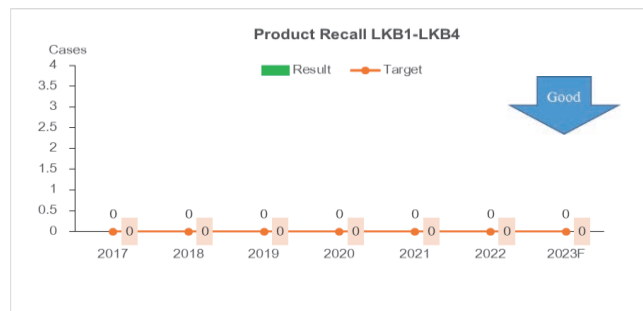


Figure 5.1-2 Product Recall



Figure 5.1-3 Quality of Raw Material and Packaging



Figure 5.1-4 Number of Green Card Supplier

5.1.3 Future Plan

- 1) Integrated Inspection system of Food Quality & Food Safety, TPM, Safety, Environment, and 7S into the checklist inspector project.
- 2) Elevate knowledge database to Electronic Libraries for quality assurance systems.

5.2 Sustainability Management

5.2.1 Implementation Status of Focused Activity

Before 2019: Environment Strategic Objectives – Elevate Environmental and Safety Levels to Meet Accepted International Standards

During this period, CPRAM (LKB) had used more energy and the amount of waste increased according to production capacity. Therefore, CPRAM (LKB) applied ISO 14000 and ISO 50001 to reduce the impact on the environment. In addition, we developed 3RS integrated waste management project aims to achieve zero waste to landfill. As a result, the energy and waste volume per ton production had continuous downward trend and CPRAM (LKB) achieved zero waste to landfill by 2018 till now.

During the 2019-2021 period: Environment Strategic Objectives – Focus on Efficient Resources Usage to Maximize Benefits and Minimize Waste and Pollution.

In this period, the problem of climate change and natural disasters had increased. Therefore, CPRAM (LKB) had sustainable business practices according to ESG guidelines. In 2020, a solar roof top was installed at LKB1 and LKB4, resulting in the ability to produce 980,000 units of renewable electricity per year and reduce carbon dioxide.

Period 2022 onwards: Environment Strategic Objectives – Focus on Sustainable Development Goals

During this period, the impacts of climate change have become more severe and CP Group had established a sustainable development policy based on the UNSDGs for its affiliates to adhere to. In addition, CPRAM (LKB) had co-project ‘chemical free from banana’ with supplier by sharing knowledge on farming according to GAP to improve the quality of life of farmer.

Furthermore, we raise the quality of life of the people in community by providing knowledge and creating careers in the community through the ‘‘CPRAM forest best for life’’ project for a period of 4 consecutive years to increase forest area and maintain ecosystem. As a result of the project, we can plant up to 7,500 trees, give more than 40,463 seedlings and the estimated carbon storage is 5,642 tons of carbon dioxide equivalent.

5.2.2 Effects

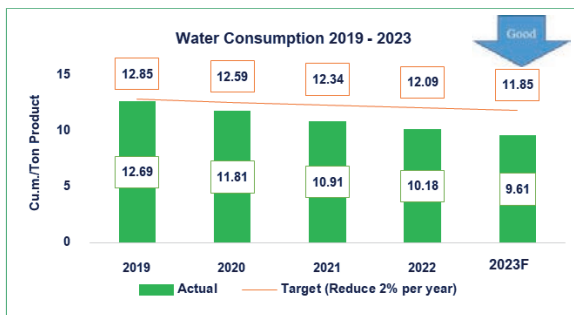


Figure 5.2-1 Water Consumption

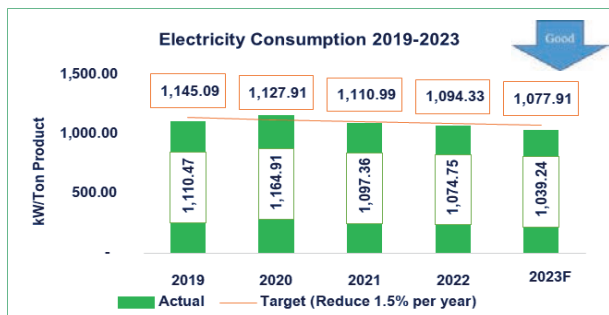


Figure 5.2-2 Electricity Consumption

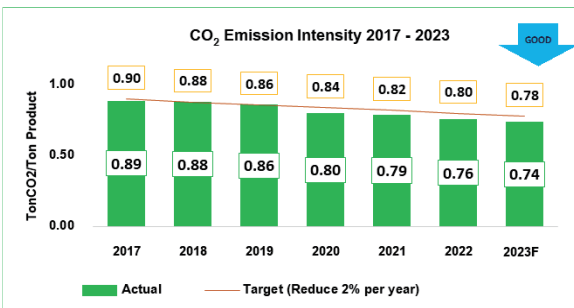


Figure 5.2-3 Carbon dioxide Emission Intensity

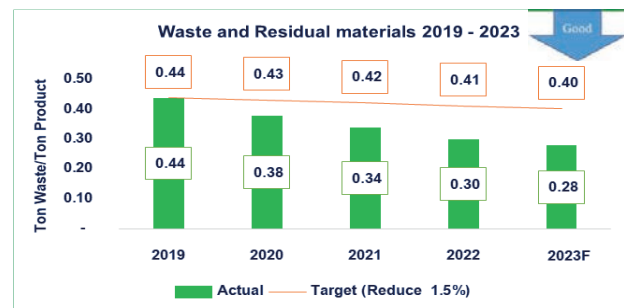


Figure 5.2-4 Waste and Residual materials

5.2.3 Future Plan

- 1) Establish a Zero Discharge project without discharging wastewater outside the factory.
- 2) apply the ISO 26000 corporate social responsibility standard system during the year 2022-2027.
- 3) Establish waste and loss reduction projects in the production process in 2022-2027.
- 4) Establish project Building an Environmental Network throughout the supply chain (GI Level 5).

5.3 IT Management

5.3.1 Implementation Status of Focused Activities

Before 2019: IT Strategic Objectives - Centralize Data Management

During this time preparing summary reports for use in management in both marketing and factories takes time and a lot of people. Moreover, there are many areas to store databases. This causes a lack of efficiency in terms of accuracy and punctuality. Meanwhile, closing the monthly profit-loss account takes a long time. This made the corrective action may be late.

Web Portal has been created for factory management reports through Datafac and marketing management reports through Datamac, making data management more accurate and faster. In terms of closing profit-loss accounts, SAP systems have been used. As a result, the profit-loss statement can be closed by the 5th of the following month.

During the 2019-2021 period: IT Strategic Objectives - Work System Application

The SAP system did not cover the Premix and Pre-blend preparation process, this process still required documents for disbursement and preparation, which frequently causes errors and could not trace back information. In addition, the work process still uses paper documents for various job approvals, resulting in delays and costly.

Therefore the IT department has developed software called CPDAS (Center Production Data Acquisition System) used in the premix and Pre-blend preparation process, which reduces the work process and documents. By key data through the CPDAS system. This results in accurate, fast, and traceable information.

In addition, The IT department has developed a Web Application system to many support the work process for reducing process steps and paper, such as the HR Connect system and Kiosk (a small structure that provides time-attendance personal welfare on the computer screen), which allows employees to check leave days, wages, and personal information by themselves. Moreover, during this period Cloud technology has become more stable and secure. Therefore, Cloud technology is used through the Office 365 system, Video Conference system and VPN to increase work efficiency.

From the 2022 period onwards: IT Strategic Objectives - Advance Tracking System for Business

The CPDAS system that the IT department own developed was unable to send data to SAP HANA (SAP's new version). Therefore, the PMS (Production management system) system was developed to replace the CPDAS system for the ability to recording, sending, and receiving data to SAP HANA in real-time.

In addition, there was also the problem of incorrect counting of the number of finished products in production lines. Therefore, an automatic product counting system with Camera AI has been developed to reduce errors in finished product counting.

5.3.2 Effects

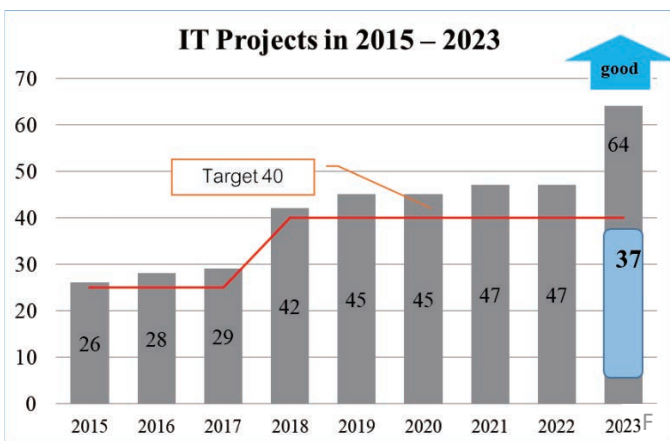


Figure 5.3-1 Graph showing the number of IT projects between 2015-2023

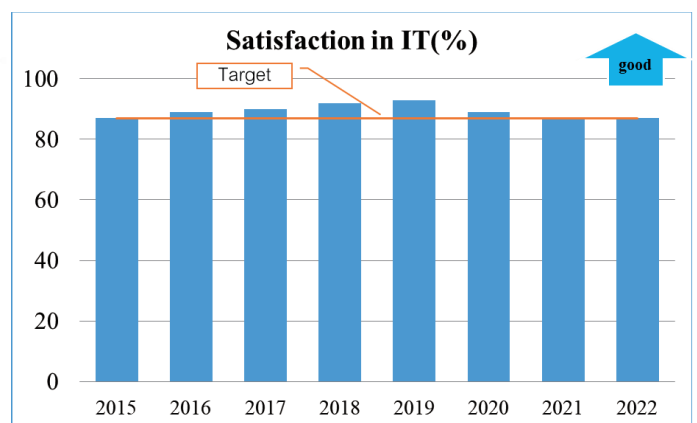


Figure 5.3-2 Graph showing % satisfaction of IT service users

5.3.3 Future plan

1. Expand the use of E-documents with Office 365 in the work process to reduce paper usage.

2. Implement AI for a smart factory by developing an IoT automation system and implementing a smart dashboard for factory control; monitoring systems in the production process such as temperature and humidity data, or in key factors of machine performance for effective prevention maintenance.

5.4 Human Resource Management

5.4.1 Implementation Status of Focused Activities

CPRAM (LKB)'s Employee structure is divided into 2 main groups: worker and monthly employee by proportion 80:20, which most workers having primary and secondary education.

Before 2019: HR Strategic Objectives - Focus on Production Capacity

During this period, the strategic objective of the business unit was Market Penetration by developing new products variety, and increasing production capacity and productivity. Which a variety of products resulted forming and decorating process need more people than standard from by machine. Therefore, there is a demand for a large number of workers, and normally the workers turnover rate is quite high.

Therefore, the Human Resources Department increases recruitment by providing labor at community sources, allowing employees to recommend friends to work with CPRAM, and starting an MOU project with educational institutions to recruit students for internships. As a result, the manpower recruitment results can be achieved at 96.20%.

In addition, internal trainers are developed to develop worker skills to support new technology and provide welfare to help living expenses such as free rice, employee shuttle bus, medical benefits, etc. As a result, the turnover rate decreased to 9.12%.

During the 2019-2021 period: HR Strategic Objectives - Focus on Capacity & Capability

As sales growth, the production line still requires a lot of labor. There is also an increasing demand for employees with skills in working with machines. This causes the need to develop workers to have extra skills.

Therefore, the HR department uses social media to recruit more employees and expand educational institutions that will join the MOU project. In addition, employees can develop extra work skills through the Skill Level project for workers at this period 556 people were developed.

From the 2022 period onwards: HR Strategic Objectives - Focus on Capability Fit for Job

During this period, automation and robot systems began to be used more in production. Therefore, there is a need for engineering employees who can control robots and employees in some area need to have digital skill.

Therefore, the HR department has developed the potential of engineering employees to manage robot ability. There are 7 engineers people have developed robot ability at present. In addition, HR set a goal of developing digital skills for 80 employees in 2023.

5.4.2 Improvement after diagnosis examination

Normally, the Human Resources Department develops (HRD) employees' skills in 3 areas: Management skills, Human skills, and Technical skills according to the job position. HRD will work with each department in the organization for gap analysis in their own departments, and plan for further training and development, as shown in Figure 5.4-1

After receiving feedback from the diagnosis examination. The HRD department has increased clarity on employee groups that need to receive knowledge in TQM, QC Way, and knowledge to improve work and create innovation, as shown in Figure 5.4-2

5.4.3 Effects



Figure 5.4-3 Graph showing the percentage of recruiting personnel

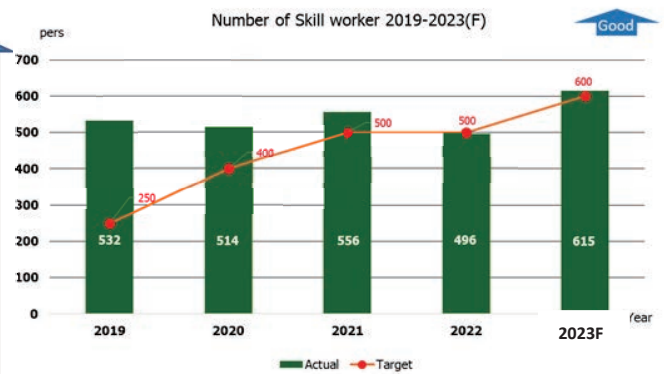


Figure 5.4-4 the graph shows the number of skill worker each year.

5.5 Smart Dispatch

5.5.1 Implementation Status of Focused Activities

Before 2019: Dispatch Strategic Objectives – Increase Product Arrangement System Efficiency

During this period, 7-Eleven stores have grown by 10% and needed daily food delivery. Therefore, CPRAM (LKB) needed to expand the factory from 2 to 4 plants for more production capacity along with daily delivery.

The dispatch department needed to increase the efficiency of dispatching process by

1. Increase dispatching area to 2 areas;
DC1 - dispatch products from LKB2, LKB3, DC2 - dispatch products from LKB1, LKB4
2. Install the put-to-light system.
3. Improve the loading area for the dispatching process with 6-wheel trucks.

After using the put-to-light system, the time taken to dispatch products per store has decreased from 0.32 to 0.17 minutes/ store.

During the 2019-2021 period: Dispatch Strategic Objectives - Increase Capacity for Product Arrangement to Support Increased Sales

During this period, there was a problem with the speed of finished product delivery from plant LKB3, which did not match the speed of product dispatch. In addition, a rapid expansion plan of 7-Eleven stores from 7,000 to 12,000 branches. This causes the dispatch department needed to increase work efficiency.

Therefore, the dispatch department developed the gravity transfer system from plant LKB3 into the DC LKB2 area to reduce the delivery process from production to dispatch by expanding the dispatch zone from 15 zones to 20 zones, increasing the server efficiency of the put-to-light system, and adding a continuous lift for transporting products. These affected total efficiency to delivery to Bakery Distribution Center (BDC) of 7-Eleven.

As a result, the number of stores per dispatching round can be increased from 580 to 780 stores/round, the speed of product dispatching increased from 102 to 94 minutes/round

From the 2022 period onwards: Dispatch Strategic Objectives - Increase Finish goods receiving Efficiency

During this period, it was found that when receiving finished products from the production department was an error in the number of finished products. Moreover, it takes a lot of people and time to transport products. In addition, the number of 7-Eleven stores has increased. As a result, the amount of use of plastic crates has increased. Meanwhile, there are not enough cleaning machines.

The dispatch department plans to improve the receiving finished product system by using the CPDAS (Center Production Data Acquisition) system to reduce errors from receiving product information from the production department and reduce the time for keying data. In addition, provide a dry cleaning machine for plastic crates with a capacity of 1,500 more plastic crate cases/per hour.

5.5.3 Effects

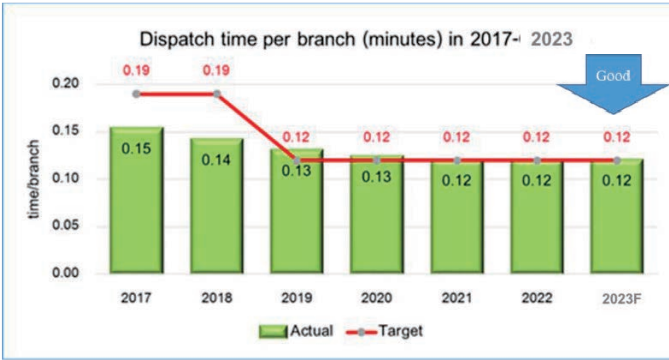


Figure 5.5-1 Dispatch Efficiency per Branch (minutes)

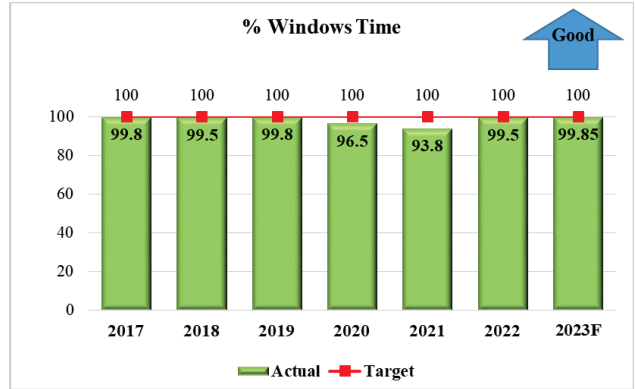


Figure 5.5-2 Percentage of delivery within the specified time period. (Window time)

5.5.4 Future plan

1. Use Automatic Guided Vehicle (AGV) to reduce workers in many conveying processes as follows.
 - Conveying finished products from the receiving point and Conveying empty plastic crates.
 - Conveying finished products into each zone.
 - Conveying finished products to the conveyor set (continuous conveyor).
2. Provide storage area for spare plastic crates system.

6. Overall Effects

CPRAM (LKB) would like to present our performance against the strategic objectives, Core Process, and support process Strategies As follows:

6.1 Tangible Effects from Strategic Objective

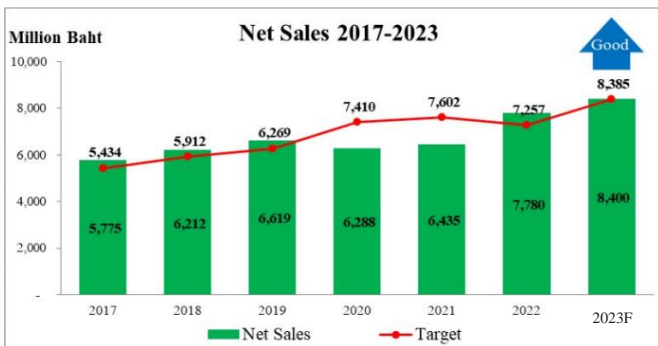


Figure 6-1 Net Sales and Profits 2017 - 2023



Figure 6-2 new product sales and Net sales Comparison

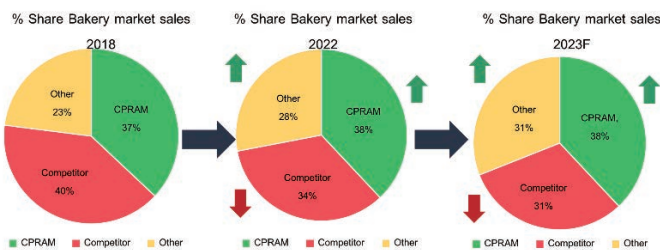


Figure 6-3 Market Share in Convenient Store (Thailand)

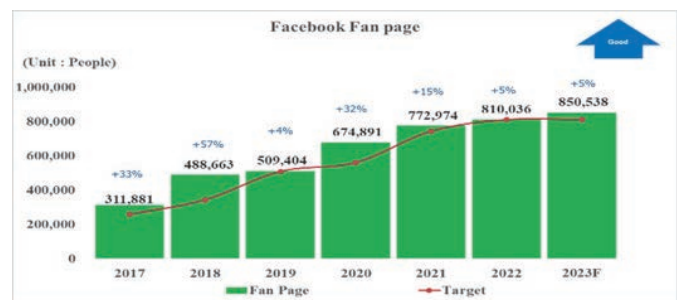


Figure 6-4 Brand Engagement

6.2 Tangible Effects from Core Process Strategies

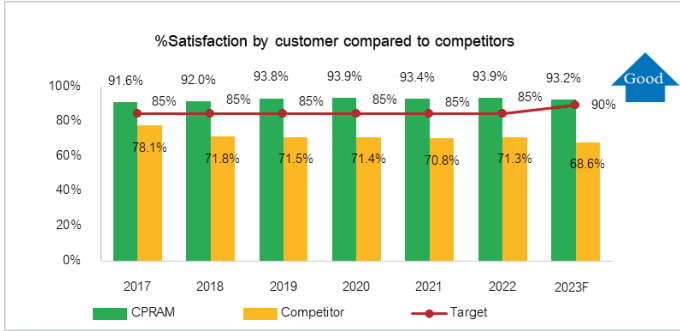


Figure 6-5 Customer Response

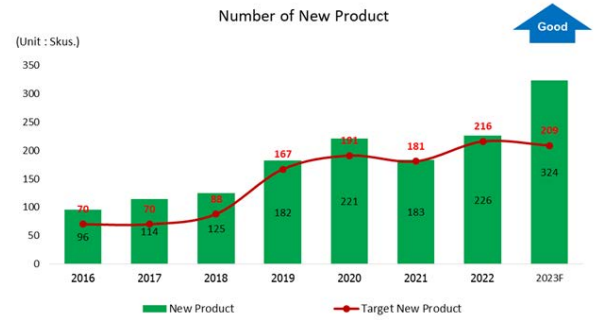


Figure 6-6 New Product Development

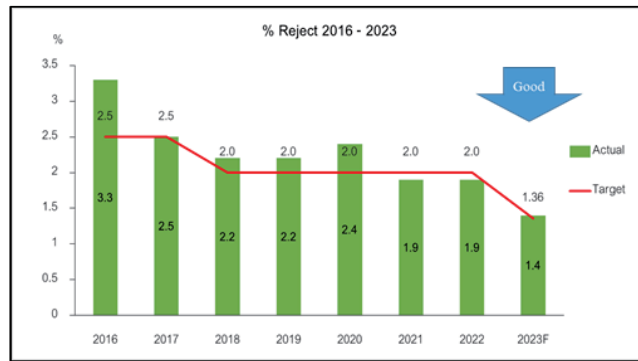


Figure 6-7 Improve Production Efficiency

6.3 Tangible Effects from Support Process Strategies

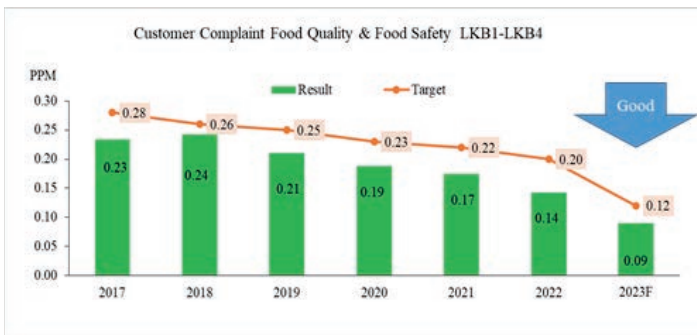


Figure 6-8 Main effect from Strategic QA Management

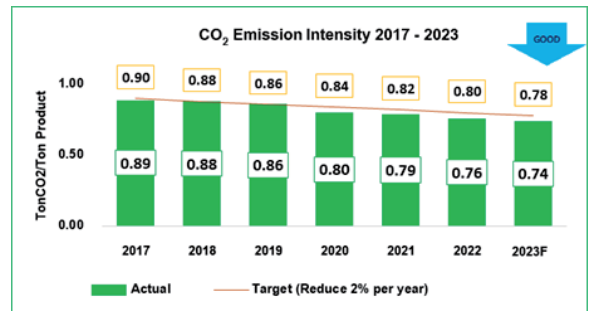


Figure 6-9 Main effect from Proactive Social and Environment Management

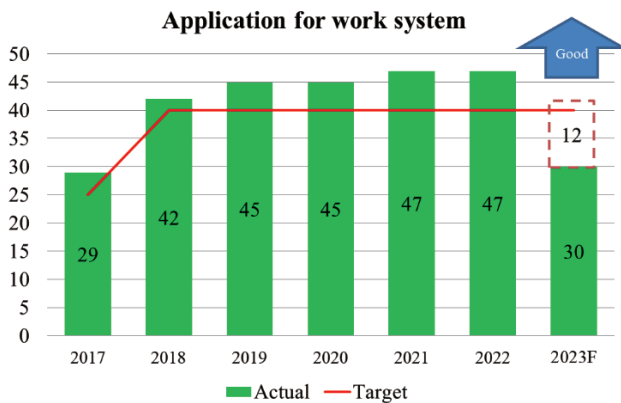


Figure 6-10 Main effect from Strategic IT Management

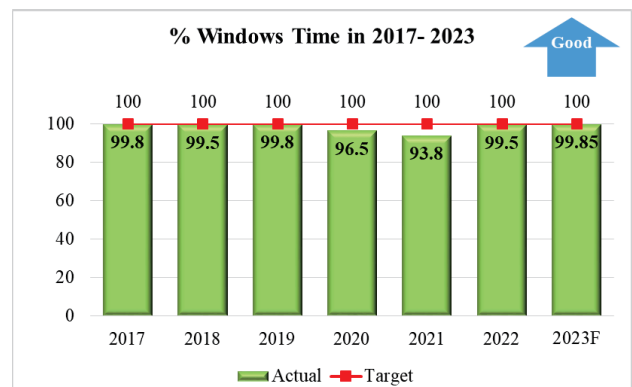


Figure 6-11 Main effect from Smart Dispatch

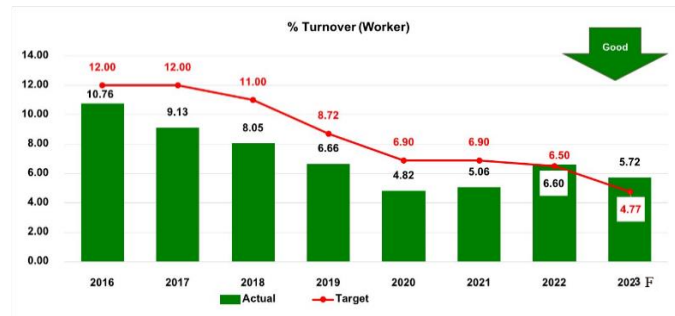


Figure 6-12 Main effect from Proactive Human Resource Management

6.4 Overall Intangible Effects

1. The Le Pen brand has a good image and is popular by building relationships between the brand and consumers in every segment.
2. Enhancing knowledge & skilled level projects provide agility, flexibility, and the ability for work replacement.
3. Having good relationships with business partners and government agencies, results in consistently having good support.

7. Future Plans

Future plans include important strategies that have a process for reviewing the results and strategies to keep up with customer changes at all times

- Market targets continuous focus on new product groups in 2025, Frozen Bakery, All Café bakery, and Chilled bakery.
- In terms of personnel, the goal is to develop workers to be more than 27% skilled workers in 2025.
- Continuous strategy for IT and automation until 2030, the goal of automation includes helping employees work more easily, reducing movement to maintain consistent production quality, and supporting new product launching. As for the IT side, there are currently applications that improve the core process, especially the project to upgrade CPDAS to PMS for use with SAP HANA.
- From the CP Group's goal to be Carbon Neutral by 2030, there is a strategic plan regarding CO₂ emissions, such as a project to increase the efficiency of energy used/ alternative energy and efficient waste management.
- The company will continue to create food sustainability and build good relationships with business partners through the ALL Delica Alliance (ADA) project by exchanging knowledge and production technology. To create unique raw materials and packaging for the purpose of high quality and competitive cost.
- Develop and upgrade partners with world-class TQM, TPM, and Lean standards, creating a sustainable value chain according to DJSI (ESG) guidelines.