

Singapore Productivity Centre **Business Improvement Series**

PROCESS REDESIGN FOR MANPOWER OPTIMISATION

Yum Cha Restaurants Pte Ltd



The Singapore Productivity Centre (SGPC) Business Improvement Series

This is a series of case studies showcasing companies that have embarked on business improvement initiatives and highlighting how productivity and innovation can transform a business to be profitable, scalable and sustainable.

Applying its expertise in the Retail and Food sectors, SGPC helps companies improve and transform. It reviews a company's practices and processes before applying the relevant tools and techniques, while incorporating the best practices of similar businesses to help ensure their competitiveness and success.

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We wanted to achieve a lean kitchen operation without compromising on our service excellence and our staff morale.

Ms Melody Tan, General Manager, Yum Cha Restaurants Pte Ltd

About

About Yum Cha Restaurants Pte Ltd

A restaurant synonymous with a wide variety of Dim Sum, Yum Cha was established in the heart of Chinatown in 2000.

Over the years, its menu has expanded to include a mouthwatering array of seafood and meat dishes such as salted egg prawns and in-house roast meats. Located in a shophouse complete with traditional wooden chairs and marble tables, Yum Cha provides customers with a nostalgic dining experience, and continues the tradition of Dim Sum push carts on weekend mornings and during their popular weekday high tea buffet.





Main challenges

- Optimise operations
- Reduce material wastage
- Maximise manpower

Objectives

- Identify and implement productivity improvement solutions to better manage manpower utilisation and kitchen processes
- Achieve business process optimisation
- Achieve lean kitchen operations without compromising the company's core values of delivering excellent service to customers and recognising employees as the most important members of the Yum Cha family

The Learning Journey

Yum Cha's management engaged Singapore Productivity Centre (SGPC) to conduct manpower optimisation and process redesign to improve productivity. The project focused on key workflow processes in the areas of inventory management, order processing and preparation, and quality checks.

By tapping on the Capability Development Grant (CDG), previously administrated by SPRING Singapore, Yum Cha received funding support for the project.

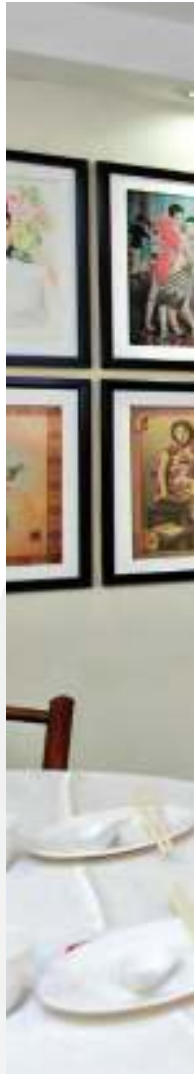
SGPC applied the 5S Housekeeping, 8 Wastes (LEAN Management), and ECRS (Eliminate, Combine, Re-arrange, Substitute) methodologies to evaluate and streamline the restaurant's processes. Employees were provided with training sessions to implement the re-designed processes and to help them understand the benefits of these changes.

The team reviewed daily customer orders, materials, production and manpower planning, and Yum Cha's monitoring and control system. They evaluated daily output per manpower capacity in terms of quantity and value, and measured kitchen utilisation versus production output, rental and manpower value. It carried out onsite manpower and process mapping studies from materials receiving, materials picking, customer orders, preparation, making, cooking, quality check and serving.

A micro-analysis was performed to identify waste in the following sections: transportation, inventory, motion, waiting, over-processing, over-production, defects and skills in manpower and process line.



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Capability and Development Support for Enterprises

Established as the lead agency driving industry transformation for food services, Enterprise Singapore* supports Singapore companies in building capabilities, innovating and internationalising.

The Capability Development Grant (CDG), previously under SPRING Singapore, supports companies in business upgrading projects in areas such as Market & Business Development, Business Innovation, and Capability & Productivity Enhancement. CDG defrays a portion of the costs incurred for qualifying projects.

In October 2018, the new Enterprise Development Grant, which streamlines SPRING's Capability Development Grant (CDG) and IE's Global Company Partnership (GCP) grant, will make it easier for companies to upgrade capabilities, innovate or go overseas under this single grant.

* Officially launched on 2 April 2018, Enterprise Singapore, formerly International Enterprise Singapore and SPRING Singapore, is the government agency championing enterprise development. The agency works with committed companies to build capabilities, innovate and internationalise. It also supports the growth of Singapore as a hub for global trading and startups. As the national standards and accreditation body, Enterprise Singapore continues to build trust in Singapore's products and services through quality and standards.

For more information, visit www.enterprisesg.gov.sg.

About 5S

5S is a process designed to organise the workplace, keep it clean, and maintain effective and standard conditions. It instils the discipline required to enable every employee to achieve and maintain a world-class workplace environment. The acronym stands for five Japanese words:



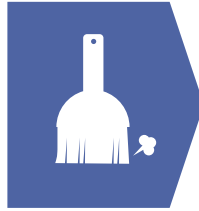
Seiri (sort)

Distinguish necessary and unnecessary items, and removing the latter



Seiton (set in order)

Enforce the dictum “a place for everything, and everything in its place”



Seiso (shine)

Clean up the workplace and explore ways to keep it clean



Seiketsu (standardise)

Maintain and monitor adherence to the first three Ss



Shitsuke (sustain)

Follow the rules to keeping the workplace in 5S condition constantly



These methodologies give our employees clear direction. In the past, they were aware that they needed to improve, but did not understand the reasoning behind it or how to go about it. 5S provided the rationale behind why certain processes must be implemented and done in a certain way. It also helps our employees understand the need for these processes from a business point of view.

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What is 8 Wastes & ECRS?

The LEAN concept is a simple strategy of removing “waste” from business processes. According to LEAN, there are 8 wastes that exist in business — namely, **Transportation, Inventory, Motion, Waiting, Overproduction, Over-Processing, Defects, and Unused Employee Skills (TIMWOODS)**. Systemic elimination of these wastes can result in faster processes, lower costs, higher quality, happier workers, and happier customers.

ECRS is another part of the LEAN framework that generates practical ideas for improvement. It stands for **Eliminate, Combine, Rearrange, Simplify**.

SGPC uses these proven methodologies to help companies improve productivity and achieve higher efficiency.

The LEAN concept is a simple strategy of removing “waste” from business processes.

Waste not, want not

The micro-analysis of on-site manpower and process line identified numerous examples of waste. These are some examples of areas that could be improved:



Food damage



Staff not paying attention



Over-production



Materials received but not checked and stored

Business Process Mapping



PAIN POINT 1

Macro-analysis revealed that the process for ordering ingredients and materials was informal, with no physical stock card to track incoming and outgoing materials and wastage.

Each department and kitchen section ordered separately based on experience and gut feel, resulting in overstocking of goods, particularly common ingredients such as salt and flour. There was no designated person to validate and approve purchases. This individualistic inventory monitoring control system was inefficient, resulting in the wastage of ingredients and materials.



PAIN POINT 2

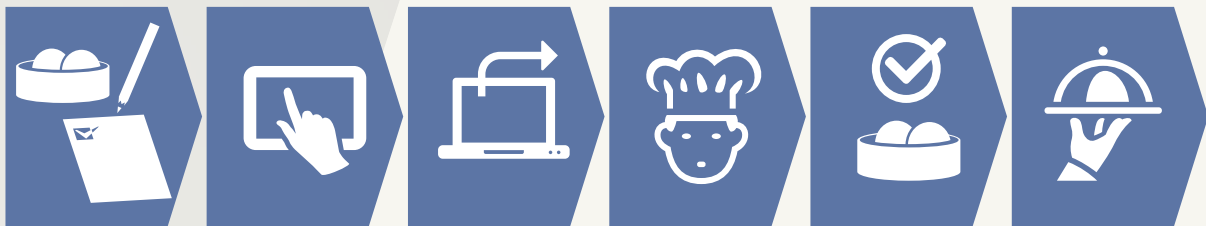
Both front- and back-of-house departments had to learn and take part in various processes based on the different ordering systems. This resulted in haste and waste, with much room to improve operational efficiency.

For instance, service staff were expected to remember five different ordering systems that were made available at different times of the day for different types of customers.

After implementing systems based on 5S, 8 Wastes and ECRS, non-value-added processes such as manual ordering for various items were eliminated, thus improving efficiency. The simplified work flow and use of self-ordering sheets for customers also improved employee and customer satisfaction.

Example of Process Redesign with Technology Adoption

Order process flow



1. Customer to select items from Dim Sum push cart
2. If food items are not available on the food cart, customer will use a pencil to select items from the menu

Front-of-House (FOH) to confirm and key customer orders into POS

Distribution Station to sort, peg and distribute the orders received accordingly

At the Back-of-House (BOH), the Dim Sum or 'Zichar' sections to process the orders received

Distribution Station to check and ensure the prepared food items are correct and presentable

FOH to serve food items to customers

New improved order process flow



Customer enters selection through self-order system

Orders are transmitted to the BOH and Distribution Station

FOH serves order

Advantages

- Quicker time to service
- Reduction in human error
- Reduction in manpower required to process each order
- Service staff can now perform higher value-added roles such as upselling and providing better service

Actionable Plans

Based on the results of the macro and micro analyses and process mapping studies, SPGC provided short-term, mid-term and long-term actionable plans.

Back-of-House



- Consolidation of materials ordering for the Dim Sum and 'Zichar' sections [1]
- Re-organisation and allocation of equipment in the kitchen to improve workflow processes for Dim Sum and 'Zichar' sections [2]
- Rebalancing of work load for Dim Sum and 'Zichar' sections. As Dim Sum makes up the bulk of the restaurant's main sales items, the Dim Sum kitchen had a much heavier workload. As part of the redesign, more basic food preparation and processes were assigned to the 'Zichar' section to help balance the workload across the two sections [3]
- Assignment of key personnel from the Dim Sum and 'Zichar' sections to manage inventory control and materials processing
- Regular daily, weekly and monthly housekeeping procedures to address process wastage and implement 5S
- Scheduled stock management by both kitchen sections to ensure adequate operating inventory
- Implementation of good manufacturing processes and food handling techniques, such as training sessions on identifying food safety hazards [4]
- Analysis of sales versus production mix, in order to prevent over-production



Front-of-House

- Menu redesign to help customers decide on their selection faster [1]
- Consolidate and streamline the steps to process the various types of customer orders
- Implementation of a seamless customer self-order system that sends orders directly to both kitchens and distribution sections [2]
- Implementation of self-help cutlery and condiments station to free service crew from chores such as table-setting and condiment preparation
- Implementation of a main buffet cart counter instead of several mobile push carts



The process redesign has reduced processing time and wastage. For example, by re-arranging the equipment layout, it now takes less time for employees to get from one machine to another, making for smoother and efficient operations.

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Result

Productivity Improvement Through Training

To ensure employees understand and appreciate the need for productivity improvement, SGPC consultants customised staff training that focused on the following:

- Build a strong team spirit
- Instil a culture for service passion
- Educate and encourage food hygiene and safety-first mindset
- Learn about TIMWOODS (see page 7)
- Explain the benefits of 5S
- Discuss case studies to identify TIMWOODS and share action plans
- Feedback and exchange sessions to encourage staff contribution for productivity improvement solutions
- Setting productivity milestones

We scheduled all employees for a half-day training session. Staff were put into groups and brainstormed how to solve our existing problems. They were then made to present solutions. Everyone voted on which solution was to be implemented. This improved staff morale because they were part of the decision-making process.

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Moving forward

Productivity improvement is a continuous journey that requires a dedicated team. To sustain its productivity improvement value, Yum Cha has set the following in place:

- Conduct weekly meetings between section heads to brainstorm quality and service enhancements
- Conduct weekly meetings between section heads and team members to address work concerns and collate work improvement ideas
- Organise quarterly gatherings to celebrate staff birthdays
- Arrange internal and external learning and development programmes on food service business operations, team building, service excellence, leadership, etc, to strengthen team core competencies and value
- Establish structured employment and performance incentive practices to motivate and retain staff



Productivity Improvement Programme Partners



The Singapore Productivity Centre (SGPC) is a one-stop competency centre that is endorsed by the National Productivity Council.

The mission of SGPC is to drive enterprise productivity for sustained growth and competitiveness. It focuses on the retail, food services and hotel sectors.

SGPC provides a comprehensive range of services and solutions to help enterprises effectively, including in-depth productivity consultancy, conferences and workshops on productivity-related topics, benchmarking and applied research.

With the formation of SGPC, companies in the retail, food services and hotel sectors can now approach a single centre for expert productivity assistance.

Over the last three years, SGPC has assisted over 1,000 companies through productivity improvement projects, productivity training programmes, conferences and workshops.

Through its activities, SGPC hopes to demystify the concept of productivity thereby promoting better understanding of its measures and how to improve productivity in the organisation.

For more information visit www.sgpc.sg



Enterprise Singapore is the government agency championing enterprise development. Its vision for Singapore is a vibrant economy with globally competitive Singapore companies.

International Enterprise Singapore and SPRING came together on 1 April 2018 as a single agency to form Enterprise Singapore. Its mission is to grow stronger Singapore companies by building capabilities and accessing global opportunities, thereby creating good jobs for Singaporeans.

The agency works with committed companies to build capabilities, innovate and internationalise. It also supports the growth of Singapore as a hub for global trading and startups. As the national standards and accreditation body, Enterprise Singapore builds trust in Singapore's products and services through quality and standards.

For more information visit www.enterprisesg.gov.sg



Workforce Singapore (WSG) is a statutory board under the Ministry of Manpower (MOM). It oversees the transformation of the local workforce and industry to meet ongoing economic challenges.

WSG promotes the development, competitiveness, inclusiveness, and employability of all levels of the workforce. This will ensure that all sectors of the economy are supported by a strong, inclusive Singaporean core.

While its key focus is to help workers meet their career aspirations and secure quality jobs at different stages of life, WSG also addresses the needs of business owners and companies by providing support to enable manpower-lean enterprises to remain competitive. It will help businesses in different economic sectors create quality jobs, develop a manpower pipeline to support industry growth, and match the right people to the right jobs.

For more information visit www.wsg.gov.sg



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Innovate.
Future-ready.