LEAN FOOD & BEVERAGE (F&B)
BACKGROUND

Modern life is frenetic, more and more people grab a quick bite during their lunch break and are too tired to cook at the end of a working day, preferring to order food from home delivery services or dining at a restaurant. Food & Beverage (F&B) industry produces more than 100 million meals per day across the world, people from developed countries spend on average 4% to 7% of their income in Food & Beverage (F&B), representing an attractive market. However, competition is strong and companies need to differentiate and/or follow the latest trends (e.g. organic food, vegan food, regional cuisine, “home made” cooking etc) while keeping the standards high both in terms of quality of products and speed of service at the right price.

The whole Food & Beverage (F&B) process, from conceptualisation to making and delivery, can benefit from the practices of Lean Management in order to build sustainable and profitable businesses. Lean Principles can be applied to all sizes of business, from small stand-alone restaurants to big chains with integrated logistics and central processes or industries supplying catered food.
CHALLENGES

THE MAIN CHALLENGE IS TO ACHIEVE CUSTOMER SATISFACTION. THIS REQUIRES FIRST UNDERSTANDING THE CUSTOMER’S NEEDS, SUCH AS:

ECONOMIC
The need for good value for the price paid.

SOCIAL
For example, a friendly atmosphere, a luxurious environment or an ethnic experience.

PHYSIOLOGICAL
The need of special food items or to enhance self-esteem and social status perception.

CONVENIENCE
The desire for someone else to do the work.

ONCE THE NEEDS OF THE TARGETED CUSTOMERS ARE CLEAR, THE NEXT CHALLENGE IS TO PROPOSE THE RIGHT TYPE OF SERVICE. THE SERVICE OF FOOD & BEVERAGE (F&B) MAY BE CARRIED OUT IN MANY WAYS DEPENDING ON A NUMBER OF FACTORS:

- Establishment type i.e. fast food, fine dining, cook-it-yourself, etc.
- Customer type i.e. health conscious, income level, etc.
- Meal time i.e. grab & go, three hour, six course dinner, etc.
- Expected customer turnover i.e. number of seating per table, take-away orders, home delivery orders, average catering order size, etc.
- Menu type i.e. set meals, a la carte, value combinations, etc.
- Meal cost
- Establishment site i.e. stand-alone, mall food court, etc.
In each case it is crucial to produce food and beverage products that conform to quality standards delivered through excellent service. A nice environment or polite waiters are not enough to overcome the negative effects of poor quality meals or long waiting times.

HENCE THE FOCUS ON PRODUCT QUALITY AND SERVICE LEVELS:

PRODUCT QUALITY
the challenge for managers is to define quality standards for each product. Then they must supervise and evaluate to ensure that standards are met. Personnel must be trained to follow standard operating procedures. Quality standards must be incorporated into production activities through standard recipe cards, purchase specifications, and proper tools and equipment to ensure freshness and consistency of flavour (in the same restaurant and among branches of the same chain).

SERVICE LEVEL
The challenge for managers is to ensure the speed and consistency of service while containing costs and ensuring quality standards. Standard procedures must be developed and personnel trained on them while proper planning of materials, equipment and headcount is essential to get orders or parts of them ready at the right time while reducing waste, inventory and cost for personnel.

OTHER CHALLENGES FOR MANAGERS IN FOOD & BEVERAGE (F&B) INCLUDE:

- Standardisation and consistent utilisation of standard cost control tools (standard recipes, standard portion sizes, etc.)
- Definition and constant measurement of the right key performance indicators
- Periodic updating of the menu at the right frequency to follow the latest trends while maximising profitability (i.e. product portfolio reviews)
- Sales and production tracking to determine how much revenue each menu item is generating (also part of product portfolio reviews)
- Availability of tools and equipment
- Training of personnel to consistently comply with food production procedures
- Food waste minimisation while balancing the right stock to enable proper service
- Ensuring proper storage (i.e. FIFO, expiry date visible, minimum time out of storage when being used etc.) and prompt discarding of near expiry / damaged items
- Resolution of production bottlenecks
- Management of layout, equipment design, and utilities usage
- Recruiting, training, scheduling and retention of good quality personnel
- Maintenance of high health & safety standards
FOCUS AREAS

Lean always starts with focusing on your customers’ needs to effectively improve quality and lead times. Whether your business operates in catering or as a restaurant chain (either slow food or fast food), customer satisfaction drives your sales and improves your production, which in turn leads to improved quality, faster service, cost savings and more flexibility. We use a holistic approach that applies Lean principles to improve your entire production & logistic systems and not just individual process steps. Involving all departments with a joint goal of reducing waste can produce and sustain long-term improvements.

AREAS OF WASTE OFTEN IDENTIFIED IN FOOD & BEVERAGE (F&B) ENVIRONMENT:

RE-WORK / DEFECTS
Wrong cooking time / technique, poor quality of materials used, lack of cleanliness drive down product quality while poor application of standard recipes and poor training drive up inconsistency of taste. Both of which have the effect of increasing returns from customers.

WAITING TIME
Kitchen operations might be delayed by a late delivery from the central food warehouse / central kitchen or from suppliers thereby increasing lead times to prepare meals and hence increasing customer waiting times. Kitchen operations may also delay one another when not synchronised, for example part of a dish might be ready and losing freshness while waiting for other components of the same dish to be ready and/or assembled. Lack of availability of seating space for dine-in customers results in customers having to wait and eventually giving up and going somewhere else to eat, also home delivery customers may have to wait due to inefficient central ordering systems or inefficient delivery services due to poor delivery area/route planning or driver utilisation.

INVENTORY
Food related products are affected by a short average shelf life, therefore it is important to set inventories at the right level to preserve freshness, optimise the utilisation of storage (cold, room temperature and heated) and reduce waste. While on the other hand inventories should not be too low that the branch is unable to fulfil orders early in the day where then customers cannot order their first choice item so they would either have to order something else or, worse still, go somewhere else to eat, resulting in a lost sale.

SPACE
An inefficient utilisation of space in the kitchen increases transportation, movement and rental cost. Dine-in table size and layout are not aligned with average customers group size thus limiting space utilisation and causing customers to leave due to lack of seating availability.
FOCUS AREAS - CONTINUED

TRANSPORT
Poorly scheduled deliveries from central kitchen to branches. Home delivery van planograms badly designed, if designed at all, providing inadequate separators between dry, heated and chilled areas.

UNUSED SKILLS
High specialisation of roles in modern kitchens drives down efficiency by limiting flexibility of kitchen staff to switch roles.

MOVEMENT
Excess movement slows down operators and increases their fatigue driving down their attention level and performances thus affecting service to customers. Also, excess movement in a kitchen increases the chances for accidents to happen, resulting in the need to wash tools again in best case accident scenarios, to scrapping dropped food, to the worst-case situations where staff get physically harmed through cuts or burns.

OVER-PRODUCTION
This occurs when planning and forecasting are not aligned with customer demand and when long lead times force kitchen staff to produce ahead of customer demand ("push" production). Over-production drives up most of the above types of waste.
LEAN SOLUTIONS

The application of Lean in Food & Beverage (F&B) begins with looking at the operations from an industrial point of view in that cooking, delivering, purchasing, servicing dine-in etc. are all operations for processing a product or a service for a customer, be it internal - for example, a different function within the same company as in the case of a central kitchen - or external, as in the case of a restaurant customer. The application of Lean principles to these processes provides faster service and better quality at a lower cost, thus driving up sales and increasing profit.

LEAN FOOD & BEVERAGE (F&B) CAN BE APPLIED TO MANY AREAS, SUCH AS:

KITCHEN
Connecting processes to increase speed of delivery improves product freshness. Introducing pull to efficiently produce only what customers want and removing processes that can be centralised result in a faster service usually achieved with a reduced headcount. The combined effect of such improvements increases customer satisfaction and loyalty.

DINE-IN
Hospitality services leverage on the improved kitchen services by leaning the process of delivering a ready meal to the customer’s table thus reducing their waiting time while improving product freshness. An increased service capacity enables the review of the seating configuration which can increase seating availability and therefore reduce customers’ waiting time and in parallel increase sales.

HOME DELIVERY
Delivery services leverage on improved kitchen services by reviewing delivery routes to optimise them and by triggering production of products delivered through the same route to be ready at the same time to improve their freshness. Delivery routes can be designed and scheduled according to customer Takt in order to increase delivery van utilisation. Also, many reasons that tie up the delivery men at the branch can be reduced so that the delivery men can spend more time delivering (hence increasing the capacity of deliveries using the same number of delivery men).

CENTRAL KITCHEN
Semi-finished goods and all products with a longer shelf life should be prepared in a centralised facility which operates like a factory. “Central kitchens” are managed with the application of the Lean principles: volumes and types of products to be pulled by branches’ orders, then production is scheduled “one-piece-flow” according to the branches’ Takt and delivered with zero defects. This results in increased service levels to the branches and the elimination of over production, waste and stock-outs.
TANGIBLE IMPROVEMENTS

LEAD TIME
- Take away customers’ waiting time from an average of above 20 minutes to an average of below 2 minutes (-90%) and peak waiting time for take away customers dropped more than 80% by introducing “just-in-time”
- Dine in order distribution layout improvements leveraged on kitchen improvements reducing delivery to customer time by 63%
- Home delivery preparation time from 31 minutes to 16 minutes (-48%)

QUALITY
- Risk of cross contamination in the branches’ kitchen and in the Central Kitchen eliminated by separating flow of raw and cooked products
- Freshness of products increased by implementing storage standards, speeding up lead times and pulling materials from storage just in time
- Hygiene and safety improved thanks to the introduction of sanitising stations and standard procedures

COSTS
- 15% to 20% headcount reduction per branch by implementing a new vacation plan
- Dine-in layout optimised to accommodate for the right group size of customers, thereby increasing capacity by 34.5% and consequently the sales by square metre (+14%, measured 2 months after implementation)
- Up to 70% of the water used for rice washing saved within the process or recycled to other processes
- Central kitchen delivery-to-branch vans re-scheduled to operate according to the value stream mapping model saving 15% of the vans
- Work in progress inventory reduced by 60% by implementing a Kanban pull system
Should you be interested to know more about our Lean services regarding this topic, then please contact us:

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