





Growth Opportunity for Small and Medium Enterprises (GoSME) Project

Some Case Studies 2015

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List of Acronyms / Abbreviations

ACCA: Association of Chartered Certified Accountants

CIMA: Chartered Institute of Management Accountants

CFA: Chartered Financial Analyst

FOREWORD

With small and medium enterprises (SMEs) contributing more than 40 % of the country's GDP and employing more than 50 % of our workforce, developing a competitive, productive and resilient SME sector is an important thrust to support the Government's aim of achieving balanced economic development and higher standards of living at all levels of society.

For this purpose, the National Productivity and Competitiveness Council (NPCC) designed the Growth Opportunity for SME (Go-SME) project to encourage entrepreneurs from the SME sector to embed productivity and quality concepts in their organisational mosaic to better compete in the local, regional and global market. The project ran from November 2014 to April 2015 and our focus was on empowering SMEs to implement productivity and quality improvement initiatives by equipping them with the required tools and techniques.

This publication highlights the achievements of a few of the SMEs which have participated in the project. It is our sincere hope that other enterprises in the country, whatever their size, make productivity their business. This is imperative to enhance growth and better living for one and all.

D. Appalswamy Officer in Charge

NPCC December 2015



ACKNOWLEDGEMENTS

The NPCC would like place on record its gratitude to the Ministry of Finance and Economic Development for providing the required funds to run the project. We also extend our gratitude to all the companies which have participated in the project and in particular to those willing to share their experiences.

Thanks and appreciations are also extended to all NPCC staff who have in a way or another contributed to the project and for preparing the manuscripts, editing the publication and designing it.

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INTRODUCTION

About the GO-SME project

The Growth Opportunity for Small and Medium Enterprises (Go- SME) project was undertaken by the National Productivity and Competitiveness Council (NPCC) in 2014 to pave the way for the SME sector to join the productivity bandwagon by implementing the various productivity and quality tools and techniques put at their disposal by the NPCC, which will help them improve and explore new avenues of growth. It was deemed important to design and implement this project given the SME sector plays a crucial role in both revenue generation and employment creation in Mauritius.

This document highlights a few of the key achievements of the Go- SME project for learning by others and encouraging other SMEs to join the productivity movement.

Methodology

The Go-SME project was implemented in three phases, namely;

- **1. SME registration and diagnosis:** The first stage consisted of registration of SMEs willing to participate in the project and conducting a company diagnosis to gauge productivity and quality related problems.
- 2. Capacity building of productivity champions: Productivity champions from registered companies were equipped with tools and techniques to improve productivity and quality.
- 3. Productivity improvement initiative: Trained productivity champions implemented productivity and quality improvement initiatives in their respective companies under the guidance of NPCC consultants.





1. AB'S EMBROIDERY & TEXTILE LIMITED

About the company

AB's Embroidery & Textile Limited provides sub-contracting services primarily in the field of embroidery. The vision and mission of the company as spelled out by the owner/director, Mr A. Boodoo, are as follows:

Vision

To reach out to export markets and to be a reference in embroidery in the local market

Mission

To offer a quality and efficient customer service.

The director is a member of a textile cluster composed of manufacturers of shirts, t-shirts, towel and badges. View the potential of clusters to ensure a continuous flow of sub- contracted work from other members of the cluster, Mr. Boodoo envisages expanding the cluster by marketing textile products locally and abroad.

Main Issues

i. Search time for thread

The amount of time wasted looking for threads prior to each production process was identified as an area of concern by the company. On an average 15 minutes were spent to search for threads. This impacted on the set- up time which is a standard of 30 to 45 minutes.

ii. Unclear targets

Reducing overtime was another opportunity for improvement identified by the company. Targets for both production & trimming teams were not clearly defined resulting into overtime work of around 3 hours daily.

Implementation of productivity measures

The following measures were implemented to improve the above situation

- 1. 5S good housekeeping techniques were implemented in the thread department.
- 2. Thread was prepared in advance on a specific table waiting for next production set up.
- 3. Workers were sensitised about how to maintain 5S and ensure production flow.
- 4. Machine parts were improved/ changed to reduce stoppage time.
- 5. Visual management techniques were used by both production and trimming teams for planning. Targets were clearly specified.



Benefits from implementation of productivity measures

a. Reduction in search time

The application of 5S good housekeeping techniques, more precisely sorting and systematic storage of all threads with colour coding, has enabled the company to reduce its search time for threads (Figure 1). Search time now takes less than 30 seconds compared to 15 minutes before implementation.



Figure 1. New thread storage system

5S in threads ensures that no time is wasted while preparing accessories prior to production

b. Increase in overall efficiency and reduction in overtime

- 1. The production level has improved- 650 pieces are now produced in 3 hours compared to 500 pieces earlier. The use of accessories ready for production (Figure 2) has resulted in the reduction of set up time. Overall efficiency has improved.
- 2. Overtime has also been reduced considerably. In monetary terms, overtime cost per month has been reduced to about Rs 650 per day (Rs13, 000 to Rs 15,000 per month).

TALLAN TOLLAN TO

Figure 2: Advanced preparation of accessories

Accessories ready for production results in decrease in set up time

c. Visual management for production

The use of visual management techniques (Figure 3) has empowered the employees to be on time with production and assume their responsibilities. Visual boards are used to track daily work status.

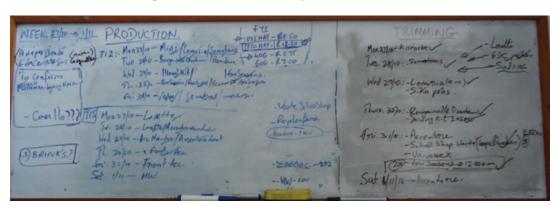


Figure 3: Visual board for production control



Conclusion

Better management of the daily workload, using good housekeeping and visual management techniques, has resulted in an orderly, clean and disciplined environment. Reduction in overtime has contributed to productivity gain in the company. Since the pursue of perfection is never ending, the management of the company now envisages to standardise current work procedures and provide further training to the employees to continuously empower them and keep them motivated.

2. BSP SCHOOL OF ACCOUNTANCY

About the company

BSP School of Accountancy and Management was launched in June 2011. The institution is the largest accountancy college and the preferred choice of students in Mauritius. It is registered by the Tertiary Education Commission (TEC) and focuses on professional accountancy education, namely the ACCA, CFA, CIMA and Bsc in Applied Accounting programmes (Oxford Brookes University). BSP has been awarded the ACCA Gold Status Partner by ACCA UK and in year 2013, it was ISO certified for the quality education that they are offering to the students. BSP has three campuses in Mauritius located in Port-Louis, Curepipe and Ebène respectively.

One of the main strengths of the company is in terms of the high calibre lecturers which it employs from Pakistan to offer full time and part time courses. It has enabled the company to attract foreign students from main land Africa and Asia. The long term vision of the company is "to position BSP as a Centre for Financial Excellence in Africa and diversify its portfolio of courses by offering BA, MBA, MSC, LLB, LLM and Phd Courses. Why not to be a Private University by 2020!" BSP also envisages helping the Government to make Mauritius a World Class Education Hub by 2020.

Main Issues

The increasing number of customer complaints with regards to the response time of the administrative staff to meet requests of customers over the phone was identified as an area of concern by the company. The provision of information to customers in a timely manner was deemed important since nearly 70 % of the sales of the company resulted from providing effective information to customers by the administrative officers through telephone calls. Upon analysing the problem, it was that found that

- i. More than three minutes were taken to answer a request/ query.
- ii. Customers had to phone several times before getting information.
- iii. Some customer queries were not answered.
- iv. Out of 40 calls received only 10 were properly attended.
- v. Statistics showed that there was a fall in the percentage retention & enrolment of customers from 92% in April to 86% in June 2014.

Implementation of productivity measures

1. Change in telephone system

The telephone system was changed from Private Automatic Branch Exchange (PABX) to London Telephone System (LTS).



2. Registration of calls and standard time to attend to request

All calls – incoming, outgoing, missed (non- attended calls) were registered in a log book daily and queries were documented. A standard time for attending to all requests was set; all requests had to be entertained within 48 hours. The log book is verified by the Head of Department on a daily basis.

3. Restructuring of staff

A restructuring of staff was done with each campus now having its own receptionists.

4. New procedures

New procedures to attend to calls were designed and applied. The standard time to attend to each call was set at less than 15 seconds.

5. Training of employees

Employees were trained on the new telephone system and the new procedures were implemented.

Benefits of productivity measures

1. Improvement in retention and enrolment rate

The retention and enrolment rate has increased from 86 % in June 2014 to 98 % in October 2014.

2. Decrease in customer waiting time

The waiting time to answer queries/request of students has reduced from an average of 3 minutes to 15 seconds.

3. Improved employee morale

The application of the new telephone system and new procedures has enabled the company to reallocate staff to other departments, thereby optimising human resources available. This has contributed to improve employee morale.

Conclusion

The process improvement concerning the waiting time has enabled the company to restore its retention & enrolment rate.

"I wish to express my appreciation for the rigorous and productive training I followed at the NPCC which has helped a lot to sharpen my training skills towards efficiency and to excel better in my institution. As there is an expression that the figures tell the tales, I have been able to convert a cost centre into a profit centre whereby both the institution and the employees are happy.

Nandini Mathura

BSP School of Accountancy



3. CRAFT AID SERVICES CO LTD

About the company

Craft Aid (Mauritius) is a non-profit organization dedicated to the welfare of the disabled people. The company was created in the year 1982. The main objective is to provide paid employment to the disabled and rehabilitate them in society. Craft Aid (Mauritius) employs mentally and physically disabled persons as well as mute and deaf person. Besides, Craft Aid (Mauritius) also provides employment to underprivileged, the needy and poor people.

The company has put people at the centre of its activities and envisages expanding further by building an environment friendly plant and a training centre primarily for disabled people, with particular focus on women in distress.

Main Issues

The underutilization of production lines in the packing unit was identified as an area of concern by the company. Each production line at the packing unit has a target of 45 carton-boxes per hour, where each carton box can contain 12 packets of sugar. However, the target was not being met resulting in low labour productivity and delivery delays.

Implementation of productivity measures

- 1. The absenteeism of employees was closely monitored by the manager.
- 2. Two funnels were placed per sugar "bac" to increase the rate of input per line.
- 3. Each operator was trained to slowly handle 3 plastics per hold when filling sugar.
- 4. Line balancing techniques were applied to stabilise performance of each line and improve efficiency.
- 5. Total productive maintenance (TPM) techniques were implemented to reduce downtime and idle time of operators waiting for machines.
- 6. Fatigue of employees due to strain was reduced through the application of ergonomic techniques.

Benefits from implementation of productivity measures

Tangible Benefits

- 1. The target of each production line in the packing unit has improved from 45 carton-boxes per hour to 55 carton-boxes per hour.
- 2. There is now more space in between the lines enabling the operator to move freely, which contributes to improving production efficiency.

Intangible Benefits

- 1. Employee morale has been enhanced due to new work techniques and environment.
- 2. Machine downtime has been reduced leading to a smoother production flow and idle time has been reduced.

Conclusion

Though the company employs more than 60% disabled workers, there is commitment from management to ensure that the business is profitable while keeping jobs. Continuous improvement in the production unit will be a definite advantage for both workers and management.



4. ENL FOUNDATION

About the company

ENL Foundation, set up in 2009 is the privileged vehicle to implement the Espitalier Noël Ltd (ENL's) Corporate Social Responsibility strategy. Its mission is to bring to life the ENL value of good corporate citizenship by taking and supporting initiatives that are in line with the ENL's culture as well as with the legal and fiscal obligations governing this sector. The company is engaged in building social capital and is active in the areas of youth development, poverty alleviation, child welfare, employee engagement as well as sports, culture and the preservation of the natural environment.

Main Issues

A backlog in administrative tasks, increasing overtime and stress to meet deadlines were identified as major concerns by the company. An analysis of the situation highlighted that improper work planning and an unbalanced work- load among the staff in the company were mainly responsible for the current situation.

Implementation of productivity measures

1. Processing of cheques

Cheques processing was reviewed to reduce overtime and stress for the administrator to finish the job within set deadlines. It was agreed that the administrator would process cheques on a daily basis rather than waiting for the end of month.

2. Sharing of responsibilities for some tasks with field workers

The workload of the administrator was reviewed. Field staffs now assist in administrative duties such as answering to frequent queries, replying to letters and answering phone calls when they are in office.

3. Work planning

The daily work plan of the administrator was reviewed to enable the latter to prioritise tasks according to urgency.

4. Processing of invoice

This process was also reviewed to reduce delay in payment and compilation of expenditure report for board meetings. There was a consensus that all invoices should reach the foundation before the 5th of each month so that all the expenses are incurred and reported accordingly.

5. Colour code filing system

The filing system was reviewed and visual management techniques were applied to ease storage and retrieval of files (Figure 4 and 5).

Figure 4: Red for Finance Files



Figure 5: Green for Administrative files



Benefits from implementation of productivity measures

Tangible benefits

- 1. Administrative backlogs have been reduced considerably leading to better customer satisfaction.
- 2. The application of visual management techniques and 5S good housekeeping techniques has led to a cleaner, more orderly and disciplined workplace.

Intangible benefits

Employee morale has been enhanced.

Conclusion

The application of lean management concepts at ENL Foundation has enabled the company to better manage internal processes leading to better customer and employee satisfaction. The company will strive to improve in the spirit of "Kaizen".

¹Kaizen: Continuous improvement



5. EXPLORATEUR

About the company

Set up in 1996, Explorateur is a provider of customised men, women and children's casual wear. These include high quality T-shirts, Poloshirts and Sweatshirts with the design either screen-printed or embroidered. The company does not only have a local market but also exports its products to different countries such as Reunion Island, Seychelles, Rodrigues, Mayotte and Europe. Explorateur is committed to providing quality products to its valued customers at competitive prices.

Main Issues

1. Delivering small lots

Workings in small volumes and fixing deadlines to deliver products to customers were identified as major concerns by the company. Analysis of the problem highlighted several variations in the production process which led to improper planning.

2. Delivery delays

The company was unable to deliver its products on time to customers. Analysis of the problem showed that one of the major causes of late delivery was the high level of absenteeism. On the other hand, the company also had problems recruiting employees because of the unavailability of skilled workers in the region.

Implementation of productivity measures

a. Review of production process

The production process was reviewed to ensure that products are delivered on time to customers. Policies were devised to ensure that the right quantities of raw materials are available when needed. The whole production process was also closely monitored.

b. Reducing rejects and reworks

Clear and specific instructions regarding garment assembly were provided to the workers and they were also asked to control the quality of their work after every operation so as to reduce reject and rework rate.

Benefits from implementation of productivity measures

Tangible benefits

The delivery time of small lots has improved since the application of the above measures.

Intangible benefits

- 1. Employee morale has improved; they are sharing responsibilities and teaming up to further improve the work-flow.
- 2. Management now has more time to focus on strategies to expand the business.

Conclusion

The implementation of the above productivity measures has enabled the company to improve its production process. The company is now better equipped to standardise its processes and identify, reduce and eliminate other bottle-necks in the production flow.

"Such a system was never implemented before. With clearly defined responsibilities, each employee knows exactly what he/she has to do. Each employee concentrates on his/her specific task only. Appropriate training is being given. The system is being reviewed on a weekly basis and is being compared to the week before and find out ways how the week after can be better. We are happy to participate in the GoSME project"

Riyaad Backus Productivity Champion



6. FEMI PUBLISHING LTD

About the company

Femi Publishing Ltd (Le Defi Media Group) is involved in the printing and distribution of daily, weekly and seasonal newspapers/ magazines. It has about 15 employees who work on a shift basis.

Main Issues

1. Paper waste

The increasing rate of paper waste which has an impact on the printing cost was identified as a major concern by the company. Data collected highlighted that paper waste was above 5 % for all the publications being printed by the company (table 1).

Table 1: Percentage (%) paper wastes for different publications

Publications	% Paper Waste
Le Defi Quotidien	11.73
Le Defi Turf	17.59
News on Sunday	37.54
Le Defi Plus	9.10
Star	12.44
Le Dimanche/ Hebdo	6.53

2. Search time

Time wasted to search for tools and ink was another concern for the company.

3. Conflicts

Conflict among workers was also an issue which needed to be addressed.

Implementation of productivity measures

1. Wastes reduction

Standardisation of internal processes and constant monitoring has resulted in a reduction in paper wastes (table 2).

Table 2: Percentage (%) paper wastes for different publications after productivity improvement

Publications	% Paper Waste Before Productivi- ty Improvement	% Paper Waste After Productivity Improvement	Variance (%)
Le Defi Quotidien	11.73	7.61	4.12
Le Defi Turf	17.59	12.14	5.45
News on Sunday	37.54	27.25	10.29
Le Defi Plus	9.10	6.13	2.97
Star	12.44	8.86	3.58
Le Dimanche/ Hebdo	6.53	6.07	0.46

2. 5S Good -Housekeeping

All the employees were trained to apply 5S good-housekeeping techniques. This has resulted into a search- free work- environment (Figures 6 and 7).

Figure 6: 5S in tools cupboard







3. Employee involvement

Employees were constantly reminded about how their performance has an impact on the company's future orientations. Peer coaching and dialogue between workers in different shifts was also encouraged to reduce conflicts. This has resulted in enhanced employee morale and a decrease in conflicts.

Conclusion

The adoption of lean techniques has enabled the company to reduce wastes while at the same time fostering positive work attitude and a clean, organised and orderly work environment. Regular audits will be conducted to sustain 5S good- housekeeping practices. Wastes are being constantly monitored and the company is finding new ways to reduce wastes.

7. FOOD WORKS LIMITED

About the company

Food Works Limited, set up in 2007 has a workforce of 13 full time employees. Foodworks is growing to be a leading manufacturer of fresh ready-made food in Mauritius supplying all the big supermarkets. It supplies processed frozen foods, ready-made meals, marinated chicken, fresh products, salads, and salad dressing. Using the finest and freshest ingredients possible, Foodworks is dedicated in bringing good quality, good taste and authenticity to every home in Mauritius and abroad. Its primary goal is to allow consumers to appreciate different cuisines in the convenience of their home without compromising on quality.

Main Issues

The high rate of returns from supermarkets, especially for products with short shelf life such as marinated chicken, chicken brochette, salad packs and salad dressings was identified as a matter of concern by the company. The total return for the period December 2013 to March 2014 was about Rs 224,834 000 (Table 3) with an average of Rs 56,000 per month.

Table 3: Rate of returns from supermarket: December 2013- March 2014

Month	Returns	
	(Rs)	
Dec 13	51,198.00	
Jan 14	47,585.00	
Feb 14	41,958.00	
Mar 14	84,093.00	
Total	224,834.00	

The analysis of the problem highlighted several causes such as over- stocking, bad weather conditions and other unforeseen circumstances amongst others.



Implementation of productivity measures

1. Monitoring the amount of products being sent to Shops

The quantity of products being sent to shops was closely monitored along with the stock level in the shops. For example, prior to delivery of products to shops, the store keeper called the shop and verified the available stock.

2. Monitoring of Fresh Products

The weekly quantity of fresh products delivered was closely monitored to minimise returns. Discounts were given on products nearing expiry date. Weather patterns and forthcoming holidays were also used as criteria to decide on the quantity of fresh products to be produced.

3. Empowerment of Supervisors by clearly defining Job Description

The Productivity Champion also undertook several initiatives (table 4) to clearly define role and responsibilities of supervisors to ensure an efficient flow of work processes.

Table 4: Defining roles and responsibilities by supervisors

Action	Purpose	Expected Result
Prepare days' work plan for Kitchen staff	So that production plan can be met	 Daily plan of work showing quantities and time schedule
Monitor production	So that problems are identified early	 Products made on time in accordance with recipes and time scheduler No unreasonable variance in quantity's All products checked for quality control including weight, appearance, date and packaging All equipment kept in working order

Ingredient requests	So that ingredients are always available	 Enquire with kitchen assistance to order ingredients for the coming day's work load
		Request to production controller for ingredients
		No stock outages affecting daily production
Assist Production	So target can be met	Providing assistance when production falling behind due to absenteeism etc.
Check cleaning	So that kitchen is always kept to a high standard of Hygiene	 Check all pans and utensils are properly cleaned and stored each day Check all surface are properly cleaned at all times
		Ensure the kitchens are always spotless and hygienic and meet all required standards

b. Weekly and Daily Planning

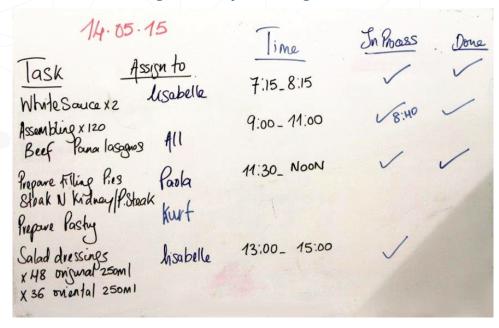
Visual planning techniques were used for planning purposes to ensure better deployment and monitoring of the work- plan. The Productivity Champion used two white boards, one for weekly planning of work and the other for daily planning (Figures 8 and 9)

Figure 8: Weekly planning of work





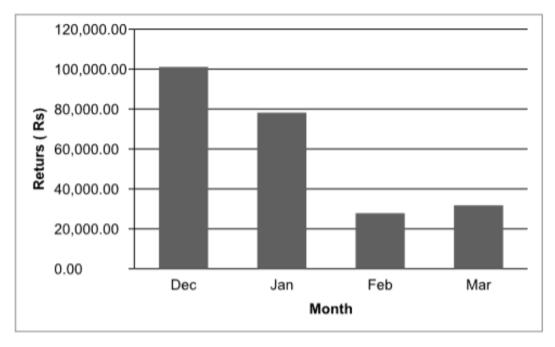
Figure 9: Daily monitoring of work



Benefits from implementation of productivity measures

1. Following the implementation of the above productivity measures, the amount of returned goods from shops has been reduced (Figure 10).

Figure 10: Rate of returns from supermarket: December 2014- March 2015



Conclusion

The management and the Productivity Champion of Food Works Ltd have been able to successfully translate the key principles and tools of lean management to improve their work processes. They are enthusiastic to continuously improve their processes and to share it with others.

Food Works Ltd, forms part of the NPCC Go SME program. A follow-up visit was made by the Vice Prime Minister and Minister of Tourism, Mr Xavier Luc Duval. The Minister was surprised to see such a high standard and quality of the product and congratulated the management and staff for their team effort. The Hon. Mr Duval was satisfied with the systems implemented and complimented Food Works for having taken the opportunity to join the NPCC Go-SME partnership which has been supported by the Mauritian Government.

The figures compared with this year and last year are quite interesting, even our sales have been less, December and January are still disasters, however we can see that something is taking shape, thanks to you and NPCC.

Kurt Staheli

Director



8. FRCI ESERVICES LTD

About the company

FRCI eServices Ltd is a digital agency specialized in the creation of websites. The marketing of its services is quite hard for the sales team as there is a lot of competition and the company's prices are higher than most competitors. One of the main strengths of the company is its references and experience.

Main Issues

The absence of a repository for all its references and a portfolio which the team could use during client's meeting were identified as major concerns by the company. Analysis of the problem showed that the company's website was not updated. Moreover, since there was no repository for references, information was stored on an ad- hoc basis and the sales team took a lot of time to retrieve the required information to be used for preparation of clients' meetings.

Implementation of productivity measures

A centralized portfolio hosted on the company's website was developed. The existing website was also revamped to give place to a new web- site which had all the needful information for marketing purposes.

Benefits

1. Quicker response to customers

The implementation of the above productivity improvement measures has enabled the company to respond more quickly to customers while at the same time increasing the number of customers. Proposals are submitted to clients on an average of 3 days compared to 4 days earlier.

2. Increase in number of leads

The company now receives an average of 2 leads per week via the new website, compared to 2 leads per month on the previous web-site.

3. Showcasing portfolio to clients

The sales team can now showcase their portfolios to clients enabling the latter to have a better idea about the company's products which facilitates decision taking.

Conclusion

The project has enabled the company to measure its performance to continuously improve. With the online portfolio available, the company is now measuring the time taken to revert back to a client with a proposal; the number of leads obtained via the website compared to the previous site and the number of conversions on proposals made to clients.



9. GITTO'S FOODS LTD

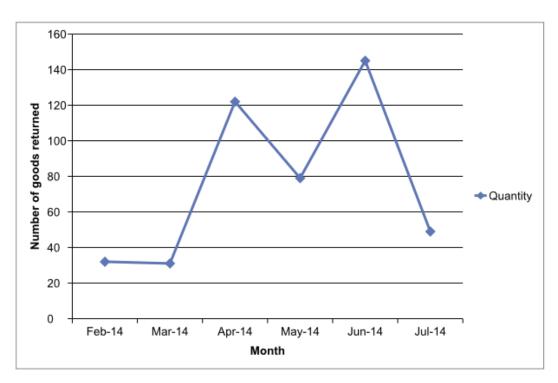
About the company

In 1992, Gitto's Foods Limited became the first company to produce locally made granola and muesli in Mauritius. It started with a small scale production and has expanded over the years and today, Gitto's Foods supplies a range of cereals and healthy snacks to leading supermarkets and luxury hotels across the country.

Main Issues

An increase in the number of products returned from supermarkets was identified as an area of concern by the company. Despite the reasonable shelf- life for the products which is between 8 months and 1 year, a notable increase was observed in the number of goods returned from supermarkets (figure 11). These returned products represent a loss in revenue for the company as expired goods can neither be reused nor further processed.





Implementation of productivity measures

1. Monitoring of sales

Client purchases and sales were closely monitored on a weekly basis to better identify trends in sales and react accordingly to orders placed by supermarkets.

2. Product monitoring in supermarkets and new sales/ marketing strategy

The products placed in supermarkets were closely monitored and the expiry dates were systematically verified. The following sales/ marketing strategies were also designed and implemented.

- a. Different ranges of discounts were offered depending on the shelf life of products.
- b. Sales and merchandising teams were assigned the responsibility of ensuring that the products were strategically located and displayed on the shelves in supermarkets.
- c. Sales and merchandising teams were trained on the new sales/ marketing strategies.

Benefits of productivity measures

The application of the above measures has resulted in a decrease of returned products from supermarkets (figure 12). After the implementation of countermeasures, the quantities of goods returned have decreased by 56.3%. This represents an average gain of Rs. 9170 / month.

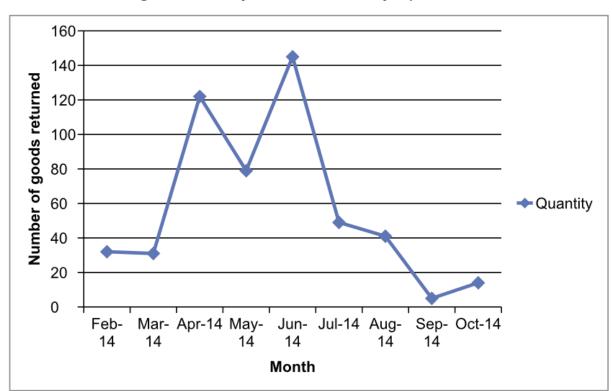


Figure 12: Quantity of Goods Returned by Supermarkets



Conclusion

The enterprise has been able to reduce goods returned from supermarkets. Enhancing relationships with clients, particularly with the 'Chef de Rayon' can further help minimize goods return thereby sustaining the gains.

"The GoSME project has been a very enriching experience. It provided a structured approach to deal with problems in the enterprise. I would strongly recommend the training to other small and medium enterprises willing to grow".

Ms Preety Nilloo

Gitto's Foods

10. JAEGER INDUSTRIES

About the company

Set up in 2002, Jaeger Industries is specialised in the manufacturing of sealing gaskets materials. The company was the first one to operate in this sector. However, since the last few years, the company has been facing a fierce competition from the informal sector.

Opportunities identified

A decrease in sales because of non- competitive prices was identified as a major concern for the company. Analysis highlighted that the problem was due to high manufacturing cost. Hence, the company decided to tackle this problem and upon investigation, it was found that

a. Overflow of raw materials:

More raw materials than required were being used to produce gaskets because the die-cut being used for the production of gaskets was not appropriate. This die-cut was made in house using a manual milling machine. The uncertainty due to this manual milling machine was identified as the major cause for the overflow of raw materials.

b. Mixing up of wastes

Wastes generated during machine set- up were disposed in a disorderly manner and could not be reused as they were mixed up.

Implementation of productivity measures

The following counter- measures were applied to solve the above problems:

i. Reduce overflow of raw materials: Machine replaced

To reduce the error margin in the die-cut, the milling machine to make die was replaced. This allowed the company to have more precise die-cuts, reduce the overflow of raw materials and produce gaskets according to the actual dimensions (figure 13)



Figure 13: New milling machine to make die



ii. Eliminate mixing up of wastes: Segregation of wastes

5S good- housekeeping techniques were applied to segregate wastes being generated to enable reuse.

Benefits

a) Reduction in material consumption

The amount of materials used to produce the different types of gaskets has decreased considerably due to the use of the new milling machine (figure 14). This has enabled the company to save Rs 99,840 monthly.

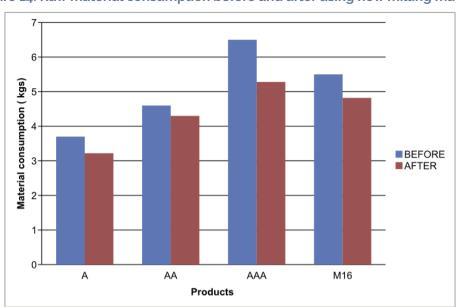


Figure 14: Raw material consumption before and after using new milling machines

b) Reduction in wastage of raw-materials

Segregation of wastes through the application of 5S good house- keeping technique has enabled the company to reduce its wastes from 13.50 kg to nil which represents a saving of Rs 12,960 monthly.

Conclusion

Continuous improvement helps a company to be competitive. It is a never- ending process but enables the company to be more profitable. Jaeger Industries remains committed to apply productivity tools and techniques and adopt the spirit of Kaizen to remain ahead of its competitors.

I wish to express my satisfaction for the session of work; most important the team work I had with NPCC. I had a wonderful time and have acquired a great knowledge in productivity and Lean Management Techniques, which are very useful for my company and me, as the director for Jaeger Group. This productivity project has allowed me to learn how to identify my problems and also how to deal with them. I have been able to come with new strategies to improve my company. And this has been a big help for me. My profit has also increased and this will allow my company to invest in future projects, hence achieving my long term vision to develop my company. This could all have been possible with the team of NPCC. "Chapeau"

Asraf KHEDARUN

Jaeger Industries



11. KRYPNET COMPUTER SERVICES LIMITED

About the company

Krypnet Computer Services Limited, set up in 2007, is involved in computer sales, repairs, cabling and maintenance. Over a period of 8 years they have remained focused on a single goal; to meet or exceed their customer's expectations.

Opportunities identified

Forgotten customer requests, delayed product delivery to clients, uncollected debts on credit given to clients, out-going quotes not followed up, loop-holes in internal communication, stock controlled in an approximate manner, long search time for documents and recurrent customer complaints were amongst some of the issues identified by the company for improvement.

Data collected to shed more light on the problem revealed the following:

- 1. On average 3-4 customer requests were forgotten on a weekly basis
- 2. A minimum of 4 days was required for responding to a client request
- 3. Approximately 3 quotes were not followed up on a weekly basis
- 4. Customer information was not relayed to concerned party
- 5. The stock volume was unknown internally
- 6. Balance sheets were not retrievable or found in messy files
- 7. 4-5 customer complaints were registered on a monthly basis.

Implementation of productivity measures

The causes for all the above issues were analysed. It was found that lack of administrative and financial knowledge to run a business despite the inherent technical expertise was the main cause. Hence, the following measures were implemented to counter- act the problem.

a) Work standards

New work standards were applied to enable the staff to better control their work and reduce errors.

b) Client specifications captured and validated

- To ensure that customers' requirements were met, all their requirements were written down and validated by the administrative clerk.
- Log books were in place for the landline in the office and incoming calls were screened in the afternoon from the mobile of the roving technicians.
- Excel worksheets were designed for stock control, suppliers details and debt collection.

c) Work plan

Regular internal meetings were carried out and all logs were cross-checked by the director in the afternoon to avoid missing out on any request and to ensure that delivery of supplies has been made.

d) Capacity building

A training plan to build the skills of the administrative clerk was established to ensure that

- 1. She responds to customer requirements in a timely and precise manner
- 2. There is no duplication in purchase of stock materials
- 3. She retrieves data from her suppliers database in a jiffy and efficiently
- 4. 90 days credit is monitored on a strict basis
- 5. No quotations are left in the drawer and
- 6. Important documents are filed and retrieved in less than 10 seconds.

Benefits

The implementation of the above productivity measures has contributed to the following:

- a. Clients' phone queries were attended to on the same day.
- b. All incoming calls were recorded in the log book and no quotation request is left unattended.
- c. The roving technician's mobile phone was handed over to the administrative clerk in the evening upon his return to the shop for screening incoming customer calls during the day and action taking.
- d. The stock, suppliers and debtors excel worksheets were up-to-date allowing hands on control and monitoring of the core of the business by the administrative officer and director.
- e. Stock in hand was more fluid in volume and more visual in management.
- f. Customer complaint has been reduced from 3-4 on a monthly basis to nil.

Conclusion

Krypnet Computer Services Ltd has largely benefitted from the implementation of the above productivity improvement programme. The company is now fully equipped and committed to embrace the journey of continuous improvement for the benefit of its stakeholders and may also consider expansion.



12. LA CHANCE LTD

About the company

La Chance Ltd launched the brand ONEYE in 1996. The company employs more than 100people and has 11 shops all over the island. The vision developed by the company is: 'To be the leader Brand in Mauritius and abroad'.

Main Issues

The inability to bring out new designs on time was identified as a major concern by the company. Analysis of the problem showed that poor planing at the level of design was a major contributor to this problem.

Implementation of productivity measures

a. Reviewing planning processes

Regular meetings were held with the design team by the director to update them about the objectives and targets of the company. The retail sales data, design plans and production plans were also reviewed during the meetings. Clear targets and deadlines were given to the design team and they were encouraged to plan their work accordingly.

b. Marketing & Research

The design team was assigned the responsibility of marketing the new collection via social media and to keep themselves updated about new trends in the market so as to meet customers' expectations.

c. Fabric database

An electronic fabric database, hosted on the company's intranet system, was put in place to reduce search time about fabrics and make information readily available to all the staff. The coding of styles was also reviewed to avoid duplication.

d. Quality work environment

The employees were trained to use 5S good- house- keeping techniques by the productivity champion.

Benefits

The implementation of the above productivity measures has enabled the company to improve its processes including the internal communication process. The quality of the work environment has also improved in all the units; design, administration, stores and production.

Conclusion

The company has learned that continuous improvement is a must if it wants to achieve its vision and expand in the future.

"Aster nou la vie in Changer! Tous pe passe dans l'orde"

Designer



13. MAMAN SALUJA LIMITED

About the company

Maman Saluja Limited is a private company incorporated on the 22nd of October 2003, based at Tamarin. With a total of twenty employees, the company is involved in the manufacturing and retailing of frozen food snack. It is a pioneer in Mauritius with respect to frozen "rotis"².

"My mother used to make "rotis" for hotels and our neighbours. The latter used to keep the "rotis" in the freezer to be warmed for the next day. After eating, they would often tell us they were just as good as the freshly prepared roti ". (Luximan Cooshna, Director).

This was identified as an opportunity by the family who started producing frozen "rotis" on a larger scale to be sold in supermarkets. Since then, the company has expanded and is today well positioned in its niche market and has also diversified its products. The range of products also includes "samosas, croquettes and rissoles"³.

Main Issues

The increasing number of defects in the different types⁴ of "samosas" being produced was identified as an opportunity for improvement by the company.

The most common types of defects identified in the production of "samosas" were listed as follows

- 1. Burnt "samoussa"
- 2. Cracked pre-cooked dough
- 3. Wrongly sealed "samoussa"
- 4. Edges of layers are not properly cut

Implementation of productivity measures

In line with its vision, of providing quality products to its customers, various brainstorming sessions were organised with the workers involved in the production of "samosas" to

- i. Review the samosa production process to detect loopholes
- ii. Identify all bad practices and the point of occurrence of the different defects
- iii. Find the causes of the defects
- iv. Design countermeasures to solve the problem.

² Roti is a type of flat bread made out of flour

³These are snacks

⁴The different types of "samosas" produced are vegetable, fish, chicken and cheese

The following countermeasures were applied to improve the quality of the "samosas" being produced

1. Cracked precooked dough.

The dough was covered with a special type of clothing to reduce cracking and loss of moisture.

2. Wrongly sealed samoussa

The sealing paste was made every 3 hours to preserve its quality.

3. Edges of layers are not properly cut

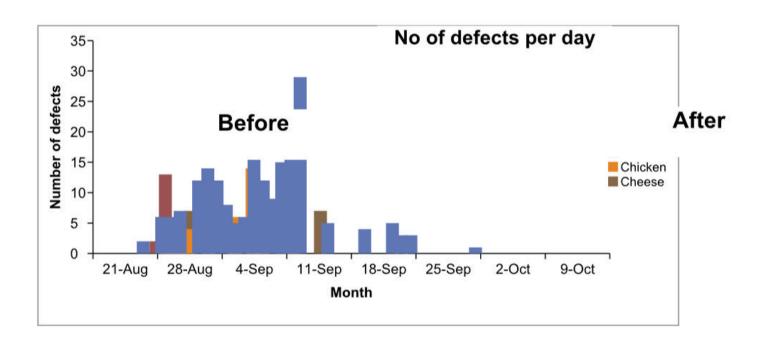
The occurrence of uneven edges which were mainly caused by the cutting of too many layers of precooked dough at a time has been reduced by decreasing the number of layers cut.

Benefits from implementation of productivity measures

i. Reduction in defective products

The number of defective "samosas" has reduced considerably following the application of the above counter- measures as depicted in figure 15 below.

Figure 15: Defect rate before and after application of counter-measure





ii. Visual standards to empower workers

Visual standards were developed at each step of the manufacturing process to empower workers to better perform quality control of samosas prior to passing it on to the next stage in the production process.

Conclusion

The company has benefited from the implementation of the above productivity measures and remains committed to improve.

14. MERITS CONSULTING ENGINEERS LIMITED

About the company

Established in 2013, Merits Consulting Engineers Limited primary business objective is to respond to a long standing criticism of Building Services Design Engineering within the local construction industry and build a business where quality of service, honesty, innovation and proactivity are brought to the design team forum and subsequently carried through and maintained until a completed installation is successfully handed over.

Main Issues

Long lead time to respond to customers' request was identified as an area of concern by the company. Analysis (Figure 16) showed that rework was the major cause of long lead time Page 42 of 52 which needed to be tackled. On an average, 30 hours were spent on rework for each project resulting into a lead time of 88 hours.

Reworks Concept Scheme Coordination with architect Design Design drawings 40 hrs Architect 8 hrs 8 hrs drawing Engineering team Engineering Engineers position all Engineering develop the scheme team transform scheme designs on the team transform Meeting drawings in the Client Brief architectural drawings in the Concept with sufficient detail for into a set of an iterative way. Design into client by a contractor to be system single line able to produce project description layouts shop drawings and manager superimposed on implement the the architect installation Drawings

Figure 16: Process and time taken to complete project

Implementation of productivity measures

The causes for rework were analysed. It was found that lack of technical expertise to complete projects and the absence of standards to realise drawings were the main causes of rework. Hence, the following measures were implemented to counter- act the problem.

a. Work standards

Work standards and templates were designed and implemented to enable the whole team to work in a standardised manner to reduce errors.



b. Client specifications captured and validated

To ensure that customers' requirements are met, all their requirements were written down and validated by the latter prior to starting any work.

c. Work plan

The work plan was reviewed with milestones clearly defined to ensure on time delivery of outputs.

d. Capacity building

validation

A training plan to build the skills of the employees was established to ensure that they better respond to customer requirements in a timely manner.

Benefits

The implementation of the above productivity measures has contributed to reducing the lead time by 68 hours as shown in figure 17, resulting into a reduced cost of Rs 12 172 per project.

Scheme Coordination Final Concept with architect drawings Design Design 2 hrs 4 hrs 8 hrs 2 hrs Write down client's brief drawing 4 hrs

Figure 17: New process and lead time to complete project

Conclusion

Merits Consulting Engineers Limited has largely benefited from the implementation of the above productivity improvement measures. The company is fully committed to embrace the journey of continuous improvement for the benefit of one and all.

"The course at NPCC gave me the aptitude to identify and eliminate wastage in delivery of our services in a very detailed and structured way. More so, it has given me the ability to see the importance of eliminating the wastage and the results through improved efficiency both in terms of client satisfaction and financial gains. I am so grateful to NPCC for having given me the opportunity of attending this course"

Jayshen Rammah

Director



15. PORKER PRODUCTS LTD

About the company

Porker Products Ltd, founded in 1986, produces high quality meat and processed products intended for supermarkets, hotels and cruise ships amongst others.

Main Issues

1. Defects

A high rate of defects resulting from products wrongly packed and processed was raised as an area of concern for the company as it led to an increase in customer complaints. Rebates had to be given to customers whenever there was complaint which accentuated monetary losses for the company.

2. Wastes

A lot of meat, particularly for chicken products, was wasted as the deboning process was done manually.

Implementation of productivity measures

In its effort to provide quality products to its customers, the management of the company organised working sessions with the workers involved in the production to (figure 18):

- i. Sensitise workers on the importance of quality
- ii. Train employees on quality and standards
- iii. Identify all bad practices and the point of occurrence of the different defects
- iv. Monitor amount of defects arising per work station
- v. Find the causes of the defects
- vi. Design countermeasures to solve the problem

Figure 18: Sensitisation and Training of staff on quality and productivity





The following countermeasures were applied to improve the quality packaging of products.

1. Visual standards

Given the different background of workers in the company, visual standards were developed and posted in each workstation to ensure that they follow all the standard procedures in place (Figure 19).

Figure 19: Visual standards posted in each workstation







2. Machine for deboning

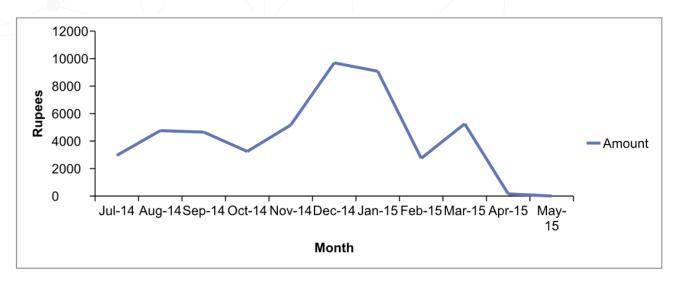
To address the issue of meat wastage while deboning, the company purchased a meat deboning machine which could remove an additional 55% of meat from the bones.

Benefits

The number of complaints due to product defects has reduced considerably. In fact, as shown in figure 20, the number of rebates being given to customers upon complaints was nil in the month of April and May 2015.







Conclusion

The implementation of the above productivity measures has been an eye- opener for the company which realised that improvement is possible and can be made with the collaboration of each and every one. It now strives to excel and be the number one in the market.

16. PRAJO ENTERPRISE LIMITED

About the company

Established in 2007, Prajo Enterprise Limited (PEL) produces and sells pickles made from fruits and vegetables both in Mauritius and abroad. At domestic level, the company is the subcontractor for a distributor to duty free shops and hotels. Its main market at international level is France.

Opportunities identified

i. Products being discounted at half price

The number of products nearing expiry date and being put on sale at half price was identified as a major concern for the company.

Upon analysis of the root-causes of the problem, it was found that products had to be discounted primarily because

- a) freshly produced products were being stacked on top of older products.
- b) the last-in-first-out method of inventory management was being used
- c) dates of production were not being recorded

ii. Cracks in jars

The increasing number of cracks in jars (Figure 21) was identified as another concern for the company. Jars being stacked too high were found to be the major cause of this problem.



Figure 21: Jars stacked too high and in a haphazard way



Implementation of productivity measures

The following actions were taken to solve the above problems:

- i. The layout of the store was redesigned.
- ii. The store was labelled with the different categories of products.
- iii. A maximum stack height was established to avoid cracking of jars.
- iv. First-in-first-out was implemented through a two-bin system (Figure 22)



Figure 22: Implementation of First - In- First- Out (FIFO) method



Benefits from implementation of productivity measure

The implementation of the above counter- measures has facilitated Prajo Enterprise Ltd to better control over the shelf life of its products. Products are no longer sold at half price, hence enabling the company to harness more profits.

Conclusion

Ms Johaheer, Director at Prajo Enterprise Ltd, estimates that the FIFO method is effective and is being used as the standard inventory management in the enterprise.







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