

# Assessment and Improvement of processes using customer-centric tools in the context of Courier Service

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**Abstract**— Services are bundles of processes and so process improvement plays a very significant role in defining the performance. Customer satisfaction depends on the cost and quality of both the outcome and the experience. Courier service is a growing industry where customers expect both efficient and effective service. Heterogeneity in products and advancement in technology raises customer expectations of service quality. Companies stay competitive in the business as long as their processes remain customer driven. In this paper, the two different methodologies i.e., conventional and customer-centric tools are briefly described, implemented, and measured. The outcome of both the methodologies is compared. The goal is to analyze by using which methodology there is process improvement seen and under what circumstances.

**Keywords**—*Process Assessment and Improvement, conventional tools, customer-centric tools, courier service industry.*

## I. INTRODUCTION

Service focused businesses in the modern economies of the world have been dominating at all fronts as it has been effectively meeting the needs and desires of an attractive group of customers. The prominence of services across the economy is reflected in the GDP numbers, with services contributing 65% of it. Services are often a blend of time perishable and intangible experiences and outcomes, which is created for the customer who acts as a co-creator. A service delivery completely entails the managing the customers, who are not just the consumers of the service, but also are an inherent part of the production of service itself. Only because the customers are involved in the service, services do not have the luxury of separation between production and consumption. It's only in pure services there is a direct interaction for the service providers with the customers. The customer is right in front of us and we deliver the service with the customer involved in it. One biggest challenge that service business often gets confronted with is the offering – service excellence is also often defined as what a business chooses not to do well. For a successful service offering, the attributes needed to attain excellence have to be targeted. This often has to be substantiated by the needs of customers as in a service environment, customers are involved in the operational process to a large extent and it has an insightful effect for the

management, as it amends the traditional role of business in value creation.

Manufacturing businesses often focus on 2 important parameters.

- Reducing the cost.
- Improving the quality.

A commodity or an entity is being sold in manufacturing, but what is being sold in service businesses is the service itself. In manufacturing, the physical reality of the product provides a base for the business to build a description, but services are more abstract than products. Another challenge to a service business is the employee management system. The strategic asset for any organization is its people who are called elevator assets. The service organization has to strike a balance between “what makes their employees to reasonably able to achieve excellence” and “what is motivating the employees to achieve excellence”. Continuous improvement becomes a part of service motto to remain saleable and competitive. In view of the comprehensive understanding of service business and the way it can be implemented in the business world, this paper attempts to impart the fundamental concepts of services in courier business.

Courier business is well renowned from other regular mail services by attributes like speed, security, tracking, individualization of express services, and swift delivery times. They function on almost all scales ranging from specific towns or cities, to regional, national and global services. Some courier companies include DHL, FedEx, TNT, and UPS. This offer services worldwide, typically via a hub and spoke model. Courier service always needs an improvement and considered as an expansion of business relations. The whole delivery process or the logistics system from backhand needs to be working for better effectiveness of the service. Unless the above action is achieved, the courier service will not satisfy the customers. The challenge is the heterogeneity of the product. So far in the industry, most of the players have their own logistics setup. Mostly all courier services have been facing pin code issues. This paper attempts to bring the various service operations tools existing in service business to get an overall insight on the way in which courier business operates and gives

a comprehensive inclusion of the fail points, which are to be addressed in this business.

## II. LITERATURE REVIEW

The literature is classified into two parts: First one is service process and assessment, followed by the literature review for process improvement tools in used in service firm.

### A. Literature review on Service Process and Assessment

Oh, H (1999) describes about the customers of service organization obtain benefits and satisfaction from the services themselves and from how the services are delivered. Bowen, D. E., Siehl, C., & Schneider, B. (1989) proposed that smooth running of service operations offers competitive advantages, particularly where differentiation between service products may be minimal. Kerzner, H. R. (2013) describes about planning, organizing, and controlling the resources are part of the service operations. Based on the labor intensity and interaction/ customization, they are divided into different quadrants. Gain strategic insights based on their position in the matrix. Metters, R., & Vargas, V. (2000) tells about how the customers are influenced on the service production and delivery. Lall, V., & Gupta, A. (2010) elucidates the research which shows that most of the service processes like payroll processing, billing, invoicing, shipping, order entry, response to service requests etc. are performing at less than 3.5 sigma quality level with a defect rate of over 23000 ppm. If there is process improvement done on the service firm then the defect rate significantly reduces to 6210 ppm.

Schneider, B., & Bowen, D. E. (1999) reaps out the purpose of the assessment is to access the overall condition and provide recommendations for future improvements so that the people are delighted. Anderson, E. W. (1998) and Ravichandran J. (2006) developed the concept of customer satisfaction by explaining the importance such that it tells whether the customer is either satisfied or dissatisfied and also studied the manner of understanding customer delight and outrage which in turn links up with the revenue generation of the organization and also have implemented that using six sigma. Quinn, R. E., & Rohrbaugh, J. (1983) give details of customers who provides significant inputs into the process such that group of people contribute ideas for the design of the process and analyzing what are the areas of concern before they become a major problem. Leidecker, J. K., & Bruno, A. V. (1984) developed an efficient way to identify company's strength and weakness through a broad review of operations. Tinnilä, M., & Vepsäläinen, A. P. (1995) applied regulation, global competition and emerging technology will force companies to re-evaluate the adequacy of customer service model in service process assessment and describes the assessment which gathers information about many different areas and aspects of the organization. Grünberg, T. (2004) tells or pinpoints areas for improvement and opportunities to capitalization. Points out where the areas are performing well, where the process needs improvement, where the course of actions should be recommended and describes about the roadmap for improvement. Kueng, P. (2000) focuses on how to analyze the process with the help of process improvement tools both conventional and customer-centric tools and different assessment techniques like interviews, employee surveys, and observations.

### B. Literature review on Process Improvement tools

Kueng, P. (2000) proposed two type of tools, they are Customer centered and stereotypical tools. Sharp, A., & McDermott, P. (2009) studied the stereotypical tools like flowchart, process flow diagrams, Pareto, histogram etc. These tools do not have customer involvement, which is seen from the paper. And also customer-centered tools like customer contact model, service blueprint, task analysis grid, touch point matrix, service engagement etc. is used for process improvement where customer involvement is more, through which customer satisfaction can be viewed. Sampson, S. E., & Froehle, C. M. (2006) elaborates the complete understanding of proportion of the time that the customer is in contact directly influences the efficiency of the service delivery and customers provide significant inputs into the process. Sampson, S. E., & Froehle, C. M. (2006) explains the group of customers may contribute ideas to the design of the process. Baum, S. H. (1990) observes that people can easily understand where exactly the process is. Particularly used in design/ redesign stages of service development. Antony, J. (2006) brings out the VOC, which is taken into consideration for process improvement. Customer needs and wants are met in determining the growth of the service. Suresh, R. K., & Mohanasundaram, K. M. (2006) explains about the process improvement tools which involves the management perspective tools like pareto chart. It explains how the data impacts the business and its growth.

Allen, E. J. B. (2012) observes how many companies failed because they didn't look into customer perspective or considers them during design or implementation. Payne, A. F., Storbacka, K., & Frow, P. (2008) pronounces that customer satisfaction is determined when there is a link between the service firm and the customers, moment of truth in order to form an effective relationship to a customer-centric one. Walsh, G., & Beatty, S. E. (2007) explains about the customer centered tools which plays an important role in selection of root cause and continuous improvement of them and understanding the customer's needs and wants will help the service firm to grow.

## III. RESEARCH OBJECTIVE

The review of literature lead to the following research question:

Will the outcome of the service or the process improvement differ when customer-centered tools are used along with stereotypical tools in the context of courier services?

## IV. METHODOLOGY

The unit of measurement is the courier service firms and the type of data used for the research is the qualitative and the quantitative data with the help of survey instrument, observations, and archival records for management. The source of data is from the customers and the management of courier service. The sample size is 90 customers and one organization. The analysis part is split up into three phases. For each phase, a traditional as well as a customer-centric tool is used and tested for assessment and analyzing the suitable tools where customer satisfaction is attained more for the betterment of the process.

PHASE 1: Definition and documentation of process

PHASE 2: Assessment of process efficiency

PHASE 3: Analysis of root cause in the process

V. ANALYSIS

A. PHASE 1: Definition and documentation of process

(Process diagram as traditional tool and service blueprint as customer-centric tool)

Mapping the process, to improve the service process by avoiding duplication of work, errors, problems and reworks. In this changing market conditions with increased competition, every organization should concentrate on the process flow.

Process Diagram:

It is useful but a limited tool in service firm. Otherwise called as “as-is” state and certainly yield efficiencies in the process. It doesn’t tell the whole story of what’s going on in a process. It is just designed to see how the process is supposed to work. It doesn’t always capture all the potential opportunities. It doesn’t link with customers in their process. The process diagram of courier service is illustrated in figure 1, right from the package to until it reaches the customers.

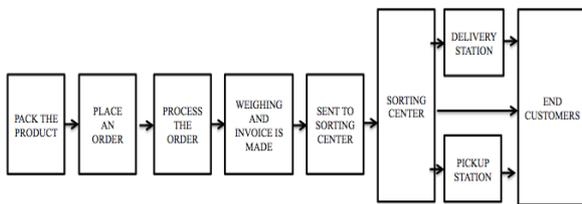


Figure 1 Process Diagram

Issues in process diagram:

- Handoffs – Not just passing but transferring information
- Bottlenecks – Restricts process to flow smoothly and quickly

Service Blueprint:

It identifies touch points, weak links of service activities that is useful for process improvement. It reinforces a customer-oriented focus among employees. Better communication is identified in service blueprint. The service blueprint is illustrated in A1. The touch points are identifies from the service blueprint. It determines line of interaction between external customers and employees, which elucidates the customer’s role and helps in knowing where exactly the customer is satisfied. Line of visibility promotes a cognizant decision on what customers should see thus enabling service design. Line of internal interaction strengthens the continuous process improvement

Touch Point Matrix:

Touch point matrix tells about the opportunities for the present system and facilitates a further development of opportunities considering both the visible and invisible parts in service blueprint. From the service blueprint, have identified the most critical touch points, which is illustrated in figure 2.

1. Enquiry Desk
2. Customer Feedback

3. Dispatch Confirmation
4. Out for delivery
5. Order Acknowledgement

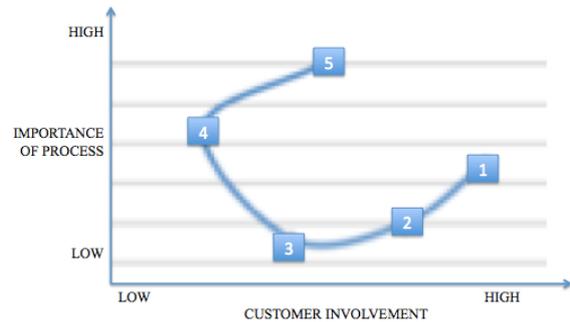


Figure 2 Touch Point Matrix

B. PHASE 2: Assessment of process efficiency

(Pareto diagram as traditional tool and Platts-Gregory Model as customer-centric tool)

The objective is to meet the customer requirements at the lower possible cost with capacity stretched, order fulfillment and delivery targets.

Pareto Diagram:

Pareto principle is an observation and not a law of nature. Based on the turnover, loyalty and the number of different factors. Pareto helps in understanding where the service business needs to focus its best efforts in order to reduce or manage capacity. Pareto here is used as an improvement assessment on key goals and issues.

- On-time deliveries
- Order fulfillment accuracy
- Customer returns

Platts-Gregory Model:

- Stage 1 – Understanding the strength and weakness of the service organization. Identifying the factors which are required by the organization to sustain in the market
- Stage 2 – Assessing the capabilities of the operations carried out in the organization. Mainly identify the current operations in practice and plot its competitors performance
- Stage 3 – Concerned with the development of new operation strategies

Based on this, took a survey among the customers who visit the courier service firm and enquired the management regarding the features, delivery time, reliability, price and flexibility of service. The comparison between the industry standards and the particular courier firm is plotted in figure 3 from the inferences from the customers perspective.

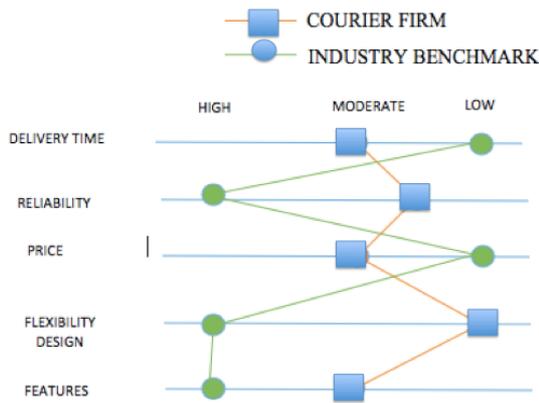


Figure 3 Platts-Gregory Model

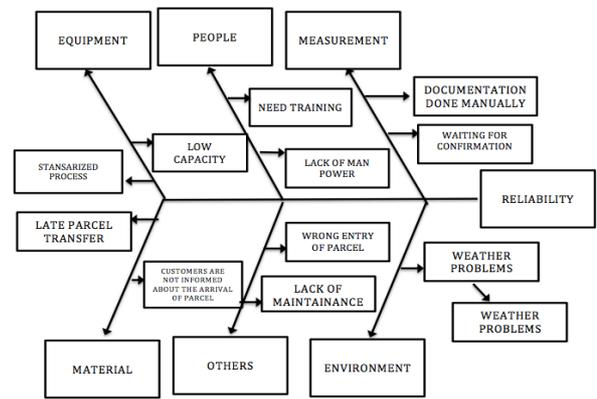


Figure 4 Root cause diagram - Reliability

Discussions from Platts-Gregory Model:

- It is found that reducing the paper work will result in a time consuming process and not an economic one.
- Loading the goods and delivering them without individual control, errors are easily made
- Executing multiple drops at the same location increases the likelihood of delivery errors
- Customers should be informed of the arrival of goods prior to the delivery boy's arrival and the processes are one way communication
- At the end of the day, the CRE (administrator) needs to decode the paper work which is time consuming process that is prone to errors and which substantially delays the invoicing
- More over it makes managing customer complaints extra challenging. Management finally lacks performance data to poymimize their service.

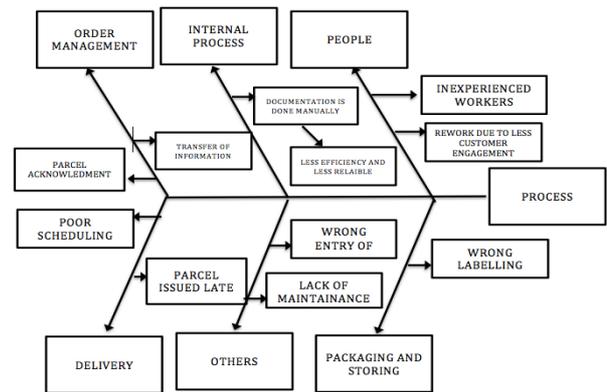


Figure 5 Root cause diagram - Process

VI. RESULTS

PHASE 1: Definition and documentation of process

Table 1 Result - Definition and documentation

TRADITIONAL TOOLS (PROCESS DIAGRAM)	CUSTOMER-CENTRIC TOOLS (SERVICE BLUEPRINT & TOUCH POINT MATRIX)
Exposing to the end-to-end of your firm's front stage experience	Exposing the surface-to-core of the business that makes up and ties to the customer's experience
Doesn't show the internal working of the organization	Uncover and document all the things
Standardized product/service	Cross-functional collaboration (knows the customer involvement and the importance of processes)
There is only one collection of systems, policies	It uses the customer experience as starting point and the organization supports the journey

PHASE 2: Assessment of process efficiency

Table 2 Result - Assessment of process efficiency

TRADITIONAL TOOLS (PARETO DIAGRAM)	CUSTOMER-CENTRIC TOOLS (PLATTS - GREGORY MODEL)
Visually depicts which situations are more significant with the company data	Visually depicted based on the customer's perception
Management data is important for plotting	Customer are considered due to which there is more customer satisfaction

C. PHASE 3: Analysis of root cause in the process

The objective is to elaborate the complete understanding of the process and elucidate the areas causing the problems.

A common use of the Ishikawa diagram is to pinpoint potential factors causing an overall effect and to help identify the root cause of non-conformances. Ishikawa diagrams were done for the quality management processes. Cause-and-effect diagrams in service firm can reveal key relationships among various variables, and the possible causes provide additional understanding into process behavior. This majorly helps us in focusing in the key issues particularly such that the business grows upwards. The major areas where focus is needed is the reliability and process. Focusing on these two factors will improve the business and also reduces cost by focusing on the particular issues and saves time. From the Platts-Gregory Model, based on the customers perspective only the critical issues are given more importance i.e., Reliability and Process. From this, there can be reduction in cost that can be incurred when the analysis is done when compared to the company benchmark. So, the root cause for the both is explained in figure 4 and figure 5.

Develops and understands the market position first and later thinks of process improvement	Helps in improving the important process
Customer viewpoint is not considered much to a larger extent	Customer expectations and needs are fulfilled

PHASE 3: Analysis of root cause in the process  
**Table 3 Result - Root cause analysis**

TRADITIONAL TOOLS (FISH BONE ANALYSIS)	CUSTOMER-CENTRIC TOOLS (FISH BONE ANALYSIS)
Focuses on the major problem and divides into sub causes	Focuses individually on the particular cause where customers are not happy
Takes longer time	Lesser time when compared to traditional process
Brings out the sub-processes briefly	Brings out the sub-processes elaborately

From the above three phases, it is evident that customers will be more satisfied when the management uses customer-centric tools rather than using traditional tools.

Table 1 explains that customer-centric tools like service blueprint helps in finding out the actual process elaborately and touch point matrix helps in mapping out the critical touch points that are needed to be concentrated more for the customers to be satisfied than compared to traditional tools.

Table 2 explains the assessment part from both the management as well as from customer point of view. Pareto diagram is plotted with the data that management has. On the other hand, Platts-Gregory model takes customers thought and helps in finding out the areas for improvement.

Table 3 helps in plotting the root cause for the needed areas where the improvement is needed by cutting down on cost and time, which eventually grows up the business.

## VII. CONCLUSION

This paper aims at giving a comprehensive perspective of using customer-centric tools in courier service along with traditional tools for identifying and improving the key processes. These tools used in this paper are generic and indifferent to the nature of the business, and hence could be applied to any organization. The tools used here are found to be valuable in any process improvement efforts. The process is mapped with a customer focus and fail points are identified in each step for action, so that customer satisfaction is achieved comprehensively. Customer-centric tools involve customers extensively in mapping and explaining the processes, thereby making it possible to gain deep insights about the process itself. This makes further improvement efforts more effective. The customer-centric approach to process improvement increases the firm performance by enhancing customer satisfaction and experience.

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**APPENDIX:**

**A1. SERVICE BLUEPRINT:**

