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A STUDY OF GAP ANALYSIS WITH LEAN MANAGEMENT

Engineering

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ABSTRACT

A study has been done to find out the Gaps of different Software service sectors. The goal of gap analysis is to identify the gap between the optimized allocation and integration of the inputs, and the current level of allocation. Some issues are identified where Gaps are prevailing in both the sectors. Some views have been given to analyze the Gaps with Lean Management philosophy as it focuses on perfection of the organization to free from the waste.

KEYWORDS

Perspective of gap analysis

Gap analysis is a formal study of what a business is doing currently and where it wants to go in the future. It can be conducted, in different perspectives, as follows:

- Organization (e.g., human resources)
- Business direction
- Business processes
- Information technology

In this paper we are trying to take care for Organizational aspects. Gap analysis generally refers to the activity of studying the differences between standards and the delivery of those standards [Rother, M. et al.]. For example, it would be useful for a firm to document differences between customer expectation and actual customer experiences in the delivery of medical care. The differences could be used to explain satisfaction and document areas in need of improvement.

However, in the process of identifying the gap, a before-and-after analysis must occur. This can take several forms. For example, in lean management we perform a Value Stream Map of the current process [Rother, M. et al.]. Then we create a Value Stream Map of the desired state. The differences between the two define the "gap". Once the gap is defined, a game plan can be developed that will move the organization from its current state toward its desired future state.

What is exactly the GAPs?

Technique for determining the steps to be taken in moving from a current state to a desired future-state. It begins with:

- Listing of characteristic factors (such as attributes, competencies, performance levels) of the present situation ("what is").
- Cross-lists factors required to achieve the future objectives ("what should be"), and then,
- Highlights the 'gaps' that exist and need to be 'filled.' Also called need-gap analysis, needs analysis, and needs assessment [Frost, Julie.].

The gaps in Software Service Companies

Due to GAP the service quality becomes applicable for both the sectors under our discussion in this paper. The most common Gaps are identified and illustrated below.

From a service quality perspective, these include:

1. Service Quality Gap;
2. Management Understanding Gap;
3. Service Design Gap;
4. Service Delivery Gap;
5. Communication Gap [Chakrapani, Chuck].

Service quality gap

Indicates the difference between the service expected by customers and the service they actually receive. For example, customers may expect to wait only 20 minutes to see their result in University but, in fact, have to wait more than 20 hours. Or a customer has to wait to deposit their money in Bank account or insurance premium for a long time in queue [Parasuraman et al.].

Management Understanding Gap

Represents the difference between the quality level expected by customers and the perception of those expectations by management. For example, in University, students as customer need to get thorough lecture of their course in classroom, not to complete syllabus promptly in schedule time. On the other hand, when a customer is going to any financial organization, he/she has to get support from all the executives accordingly as per customer's requirement. But, inmost of the cases, it is found that customer executives are too much busy to support customer to finish his own responsibility, which supports promptness of the service but it is needed to emphasis the order accuracy as per the customer's need.

Service design gap

This is the gap between management's perception of customer expectations and the development of this perception into delivery standards [Schonberger, R.,J.]. For example,management might perceive that customers expect someone to answer their telephone calls in a timely fashion. To customers, "timely fashion" may mean within thirty seconds. However, if management designs delivery such that telephone calls are answered within sixty seconds, a service design gap is created.

Service Delivery Gap

Represents the gap between the established delivery standards and actual service delivered. Given the above example, management may establish a standard such that telephone calls should be answered within thirty seconds. However, if it takes more than thirty seconds for calls to be answered, regardless of the cause, there is a delivery gap.

Communication Gap

This is the gap between what is communicated to consumers and what is actually delivered. For example, the technical institutes always emphasize on the their placement strength, but actually after completion of the course students will get the scope not as per the propaganda. On the other hand, financial organization always makes advertisement the profitability of their products, and customers will rush to purchase it, but at the end it is found that profitability is not sufficient.

Implementing gap analysis (external and internal)

Gap analysis involves internal and external performance analysis. Externally, the firm must communicate with customers. Internally, it must determine service delivery and service design. Continuing with the service quality example, the steps involved in the implementation of gap analysis are:

- Identification of customer expectations
- Identification of customer experiences
- Identification of management perceptions
- Evaluation of service standards
- Evaluation of customer communications

The identification of customer expectations and experiences might begin with focus-group interviews. Groups of customers, typically numbering as per admissible, are invited to discuss their satisfaction with services or products. During this process, expectations and experiences are recorded. This process is usually successful in identifying those service and product attributes that are most important

to customer satisfaction.After focus-group interviews are completed, expectations and experiences are measured with more formal, quantitative methods. Expectations could be measured statistically using questionnaires with Likert scaling [Liker, J.,K.]. Experience or perceptions about each of these attributes would be measured in a similar manner.

Gaps can be simply calculated after quantification the two measurements for each of the attributes. Management perceptions are measured much in the same manner. Groups of managers are asked to discuss their perceptions of customer expectations and experiences. A team can then be assigned the duty of evaluating manager perceptions, service standards, and communications to pinpoint discrepancies. After gaps are identified, management must take appropriate steps to fill or narrow the gaps.

The importance of service quality gap analysis

Gap analysis is important to firms because gaps between customer expectations and customer experiences lead to customer dissatisfaction. Hence, measuring gaps is the first step in enhancing customer satisfaction.

Additionally, competitive advantages can be achieved by exceeding customer expectations. Gap analysis is the technique utilized to determine where firms exceed or fall below customer expectations [Fuller, Neil.].

Product applications

It should be noted that gap analysis is applicable to any aspect of industry where performance improvements are desired, not just in customer service [Womack, J.P., et al.]. For example, the product quality gap could be measured by (and is defined as) the difference between the quality level of products expected by customers and the actual quality level. The measurement of the product quality gap is attained in the same manner as above. However, while service delivery can be changed through employee training, changes in product design are not as easily implemented and are more time consuming.

Gap analysis can be used to address internal gaps. For example, it is also applicable to human resource management. There may be a gap between what employees expect of their employer and what they actually experience. The larger the gap, the greater the job dissatisfaction. In turn, job dissatisfaction can decrease productivity and have a negative effect on a company's culture.

Why Lean management is required?

On the above brief discussion, we found that all the previous measures essentially aim in finding out the defects of the system. However, it is more important identifying the wastage in thesystem [Womack, J.,P., et al.]. Wastage adds no value. Lean Management methodology helps us to remove the waste of the system.

On a example we can say, in University the Computer Science students attend workshop in the first year of their study. Mechanical workshop methodologies and techniques, which they learn, have no usage in their career. This is the waste.

On the other hand, in the Bank there are so many fixed deposit schemes. So, one who are purchasing a scheme having present rate of interest. When he will withdraw the cash after ten years same interest will be counted, but the market value will rise more and more in ten years. So, the person who is going to earn the interest after 10 years may be wastage.

Lean Management emphasizes on the wastage of product and services as per the present day needs and try to improve accordingly the system for the future day needs [Plenert, Gerhard.].

Lean Philosophy

"Pursuing perfection to meet or exceed internal and external customer requirements by focusing on the entire value stream and a dedication to continuous improvement, learning, and waste reduction [Liker, J.K. (160)], [Womack, J.,P.]."

Table 1. Some themes can be emphasized to minimize gap

Theme	Description
"Emphasize participation and empowerment"	By creating a sense of ownership among as many stakeholders as possible, employees will be more likely to enthusiastically participate and internalize the suggested changes. "Leaders need to encourage members to take ownership and be autonomous independent thinkers".
"Create a change culture"	"Use culture as a tool or anchor to enable Change to occur". Encouraging thoughtful preparation and dissemination of ideas will help.
"Emphasize purpose and vision"	"Leaders should provide a consistent and strong justification for implementing the change".
"Emphasize communication"	"Communicating is key to working through problems and successfully implementing change". It should be open and honest, utilizing all means and vehicles of communication.

Findings

Software service is one of the most important pillars of Indian economic growth. A continuous journey is occurring to minimize defects this sector. In this paper we highlighted few common issues of the sector where some gaps are still prevailing. A discussion has also been taken in account to analysis the Gaps by statistical method. The most up-to-date management philosophy should be implemented to GAP analysis as it supports to free the wastage of the system rather to identify the defects and also gives the remedial measures.

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