

Framework for Continuous Service Improvement

Shivank Saxena
Department of Information Technology
And Management
Illinois Institute of Technology
ssaxena12@hawk.iit.edu

ABSTRACT

This Paper outlines my views over Continuous Service Improvement Framework which can result in better services offered by the organizations to its clients. A systematic approach to capture improvements have been defined based on their priority of impact, difficulty, addressing of implementation and continuous monitoring of progress for adhering to the sustained operations and agreed service level.

KEYWORDS

Deming Cycle, PDCA, SEDAC, Six Sigma, Service Level Agreement

1. INTRODUCTION

With the increasing competition and market pressure due to globalization, organizations require to meet the industry standards and pace of rapid technological advancements. For these things to happen, they require optimally designed business processes consisting of a well-structured continuous improvement framework that can help the organization to adapt to the rapid market and technological changes with improved services. The business processes are the well-structured continuous improvement framework which supports an organization to outperform even in tough competition environment. The hereby discussed CSI model describe several processes which help in improving in areas identified by stakeholders such as process variation, delays or failure, thereby gaining customers trust and satisfaction.

2. OVERVIEW OF CSI FRAMEWORK

Continuous Service Improvement deals with identification of models and helping them improve their objectives of service center in a systematic manner. Figure 1 illustrates the framework overview defining 4 different phases and their associated models.



Fig. 1 Different Phases of CSI Framework (Source [1])

PHASE 1: Formulate Improvement Objectives: Stakeholder Analysis Model

The ways of improvement can be determined by various sources such as Process audits, project Metrics, Quality review, Incident analysis, and feedbacks provided by the customers which can be combined to result objectives for further improvement. For more systematic approach, the stakeholder analysis model is applied. Improvement goals induced will improvise the relevance and focus towards the framework, keeping in mind the stakeholder's contemplations and limitations for giving a holistic view. This model mainly deals with identifying the key stakeholders and their needs followed by capturing the constraints faced by the service providers and users. Lastly, based on the constraints, improvement objectives of the service center are defined.

PHASE 2: Prioritize Improvement Objective: Interpretive Structural Model

The stated improvement proposals from phase 1 are checked for their feasibility and significance in phase 2 and are later prioritized based on pre-defined criteria. While various opportunities to upgrade quality consistently exist inside the venture, it is implausible to expect that each convey a comparative centrality or can yield same results inside as far as possible. Key criteria for need improvements could be an effect on the customer business, time and resources required, trouble in usage, conditions, hazard included and so on. The

objective of administration tasks is to bolster the benefits of administration along with the consumer loyalty through expanded accessibility and dependability. This may cause problems during implementation which can be avoided by prioritizing the objectives defined for service improvement. The John Warfield's Interpretive structural model can be used in defining priorities of objective using hierarchical approach where attainment of one lower level objective enhances attainment of higher-level objectives. The dependency among objectives in previous Stakeholder Analysis Model are characterized by priorities. Based on these dependencies, the model is formulated, and its hierarchical structure is analyzed to prioritize service requirement. The sequence numbers are defined for the all the improvements carried out which defines the road map for further phases.

PHASE 3: Execute Improvement objectives: PDCA, SEDAC an Six Sigma

The proposed improvements must have an organized methodology for their implementation. Each improvement differs with the rest in benefits and complexity which makes their approach different from one another. Figure 2 depicts the graph which defines the relation among difficulty level and impact. The basic improvements are carried out using PDCA, SEDAC and the complex ones are carried out using Six Sigma approach [1].

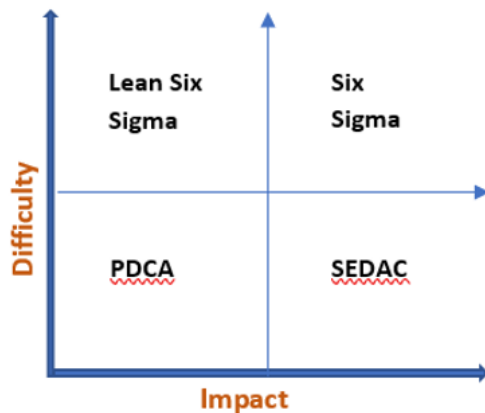


Fig 2. Relation between difficulty level and impact

PDCA is a classic quality management model which was proposed by Shewhart (father of statistical quality control) and was practiced by Dr. W. Edward Deming (American Quality management expert). Therefore, it is also known as the Deming cycle. Quality improvement is a cyclic procedure that is consistent and will increase the quality to another level by the end of the cycle. PDCA is a four-step iterative administration process generally utilized in quality management endeavors. The four steps are defined as: Plan, Do, Check and Act [2]. These steps play an active role during improvement implementation process. The Planning step requires "5W1h" – what, why, who, when, were and how for

determining the problems and their improvement prospective. This step is followed by implementation and practice step which includes 3 parts namely – Do, Control and Regulate [2]. The third step helps in evaluation of efficiency of the system after the proposed improvements are successfully implemented. The last step marks as the most important step which collects the experiences of successful and unsuccessful improvements for future references. Therefore, the actions are recorded to avoid future reoccurrence of similar unsuccessful incidences or to propose standard solution.

Six Sigma works on the principal of reducing variation in service processes while reducing customer dissatisfaction, failure, defects and delays. It follows a well-defined approach for gaining profitability by enhancing service quality, ensuring customer's satisfaction [3]. This is done by identifying the cause of defect and hence proposing improvement solutions. At time it involves highly complex processes which involves analysis of decision-making data. It aims in delivering low cost improvement solutions with immediate returns which helps organizations to revive soon after a failure. Most of the IT organizations uses lean Six Sigma or Six Sigma whose works through approach but results in the same output. Lean Six Sigma helps in identifying waste processes which do not benefit to the product's value but cause severe failure, delays or defect whereas Six Sigma works on reducing the variation in processes [3].

SEDAC stands for Structure for Enhancing Daily Activities through Creativity. This is an improvement methodology which proposes ability to form strategies and sustain them within an organization. This was proposed by Dr. Ryunji Fukuda who defined structures and steps to characterize improvement and implement improvement objectives. It distinguishes what to enhance and how to quantify and focus for development [4]. As per the realities and information examination it gives ideal improvement arrangement and guarantees adherence to improvement to avert reoccurrence.

PHASE 4: Managing Improvement Objectives: The policy Objective Matrix

The Policy Objective Matrix is a viable device for envisioning top level administration duty for carrying out improvement and changes into solid exercises. It was proposed by Dr. Ryuji Fukda. This Tool helps in defining the improvement objectives in terms of relevant projects and activities which can be tracked and monitored for the implementation. After the improvement processes are achieved, the pictures of desired outcomes are documented for future improvements. This is usually carried out using PO matrix which helps in tracking the improvement objectives starting from setting the priority of the objective till the time expected outcome are delivered to the SLA's [1].

3. CONCLUSION

It is a mandate for every organization to carry out Continuous Service Improvement for ongoing success of their business. The CSI framework discussed above would help the organizations to improvise by implementing various processes while decreasing the chances of failure, delay or downtime. This will increase their efficiency and would gain customer's trust.

4. REFERENCES

- [1] Framework for Continuous Service Improvement(CSI): Optimizing by dovetailing different systemic frameworks; Supriya Kummamuru 2011; 2011 IEEE International Conference on Quality and Reliability; DOI: 10.1109/ICQR.2011.6031731
- [2] Quality improvement methodologies - PDCA cycle, RADAR matrix, DMAIC and DFSS; Journal of Achievements in Materials and Manufacturing Engineering; M. Sokovic, D. Pavletic, K. Kern Pipan; November 2010; Vol 43
- [3] Using six sigma in new service development; Atarod Goudarzlou ; Tan Kay Chuan; 2008 International Conference on Service Systems and Service Management; DOI: 10.1109/ICSSSM.2008.4598530
- [4] TAN Shou-biao, XU Chao, LI Zheng-ping, "Japan Software Quality Assurance Practices", Computer Technology and Development Shanxi Computer Federation Shanxi, pp. 46-52, 2007.