

## Persistency Improvement through Six sigma in Life Insurance Industry

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**ABSTRACT** : Success of six sigma implementation has been reported in the manufacturing industries group. Recently, six sigma practices as quality management initiatives have received wide attention of many practitioners and researchers in service industry such as life insurance industry. The purpose of this study is device the way to improve the persistency in Indian life insurance industry. Persistency improvement has gained increased value among businesses and has been accepted to have brought tangible financial benefits to the firm. Data were collected through annual report of the insurance industry and questionnaire was administered to the customer for market survey. For realization of improvement project DMAIC model has been used. The process is recorded according to SIPOC model and improved by the usage of solution selection matrix models. This process is mutually beneficiary for the business people and also attracts the customers, and it results to the efficient use of agent to meet even more policy holder needs

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### I. INTRODUCTION

Life Insurance is one of the fastest growing sectors in India. All life insurance companies in India have to comply with the strict regulations laid out by Insurance Regulatory and Development Authority of India (IRDAI).

In the insurance industry, some customer policies will inevitably lapse, or expire, without payment. If sales agents lack the requisite drive to recover the business from these individuals, the organization's retention rate will suffer. So when agents for life insurance company became more focused on attracting new customers than keeping old ones, retaining less than 1 percent of all lapsed policyholders company leaders initiated a year-long quality project to identify why customers were not renewing, and how best to regain their business.

Insurance companies face varied challenges. Many a times the focus is on those issues that affect new business generation. But we tend to ignore the renewal aspect of the business. And we lose out on an important metric. Persistency refers to the volume of business that a life insurance company is able to retain. This rate can be gauged with the help of "persistency ratio". It implies "Percentage of an insurance company's already written policies remaining in force without lapsing or being replaced by policies of other insurers." Simply put,

***Persistency = No. of Clients Paying the Premium / Net Active Clients \* 100***

To remove ambiguities in reporting persistency across life insurers, the sector regulator, IRDAI, recently made changes to the norms for such disclosures and put in place a standard formula to be followed by all life insurers in reporting their 13th, 25th, 37th, 49th, 61th month persistency ratios.

### II. PROBLEM DESCRIPTION

The current situation some customer policies will inevitably lapse, or expire, without payment. If sales agents lack the requisite drive to recover the business from these individuals, the organization's retention rate will suffer. So when agents for life insurance company became more focused on attracting new customers than keeping old ones, retaining less than 1 percent of all lapsed policy holders company leaders initiated a year-long

quality project to identify why customers were not renewing, and how best to regain their business. The policies lapses is increase compare to the previous year so the persistency ratio will be decrease. Decrease in persistency ratio results in increased pressure on revenue and reduced profitability.

**A. OBJECTIVE**

The Main Objective of the study is to improve the Persistency Ratio for the insurance industry by implementing DMAIC methodology. By implementing this DMAIC concept, it will Improving in collection percentage, customer retention, and Increase distributor satisfaction.

**B. PROBLEM ENVIRONMENT**

The current situation some customer policies will inevitably lapse, or expire, without payment. If sales agents lack the requisite drive to recover the business from these individuals, the organization’s retention rate will suffer. A large percentage of customers do not renew their life insurance policies, as is evident by statistics released by IRDAI (Insurance Regulatory and Development Authority of India). The persistency rate in India stands at 61% for the year 2015-16, while internationally, the ratio is touching 90% in the 13th month itself.

**III. METHODOLOGY**

**A. DEFINE PHASE:**

This Define Phase helped in understanding the customer’s expectations and it helps to setting up the goals to meet those expectations. By applying the Define Phase to improve persistency in insurance industry a business case was developed, and the risk and the benefits of the project was identified.

Tool used in Define phase:

**1. Project charter**

Table1 Project Charter

Project Name: <b>Implementing Six Sigma For Process Improvement</b>		
START DATE: 14/06/2017		COMPLETION DATE: 30/03/2018
PHASE	GOAL AND START DATE	TOOLS USED
<b>Define</b>	Start at 14/6/17 to define and produce a business case, project objective, Project Scope, Project Plan and Project charter for this Project	1. Reason for selecting the problem 2. Project Charter 3. SIPOC Diagram
<b>Measure</b>	Measure various attributes using Process Flowchart, conduct market survey	1. Process Flowchart 2. Data Collection 3. Market Survey
<b>Analyse</b>	To set baseline to develop a Process improvement	1. Voice of Customer 2. Pareto diagram 3. Case and Effect diagram
<b>Improve</b>	To build an improved process	1. Solution selection matrix
<b>Control</b>	To verify and validate the process.	1. Control the process

The project charter was referred throughout the lifecycle of the project. Also it helped to broadly define the project deliverables, schedule, and completion

**SIPOC DIAGRAM:**





Figure 1 SIPOC Diagram

**B.MEASURE PHASE:**

It involves the Identification of performance for the insurance industry. For successful completion of the MEASURE Phase these following tools were used:

- 1. Process Flowchart
- 2. Data collection
- 3. Market Survey

**1. Process Flowchart:**

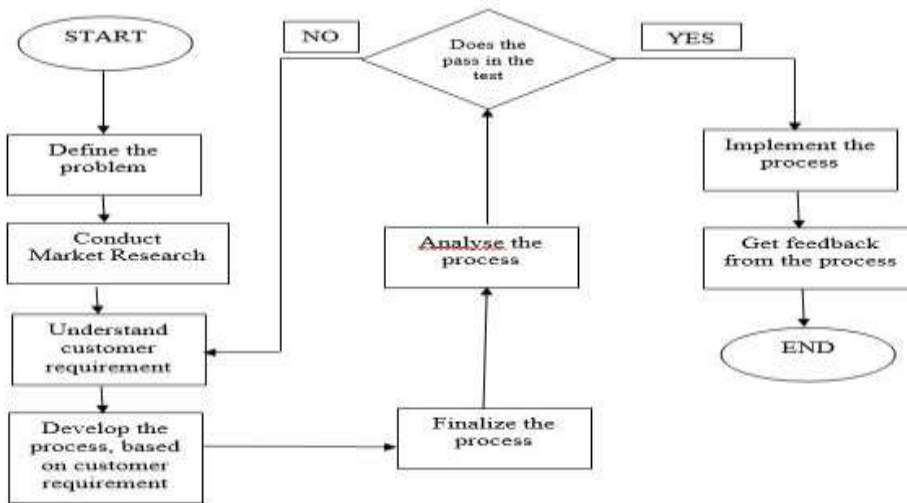


Figure 2 Process flow chart

**2. Data collection:**



Figure 3 Country wise Persistency Ratio

Table 2: Represents the Persistency ratio in Some Insurance Industry

	HDFC	ICICI	LIC	TATA AIG	BIRLA SUN	BAJAJ
13th month	81	82	91	86	65	89
25th month	73	76	82	79	61	76
37th month	64	62	77	71	57	71
49th month	58	55	63	56	50	51
61th month	57	47	61	38	39	48

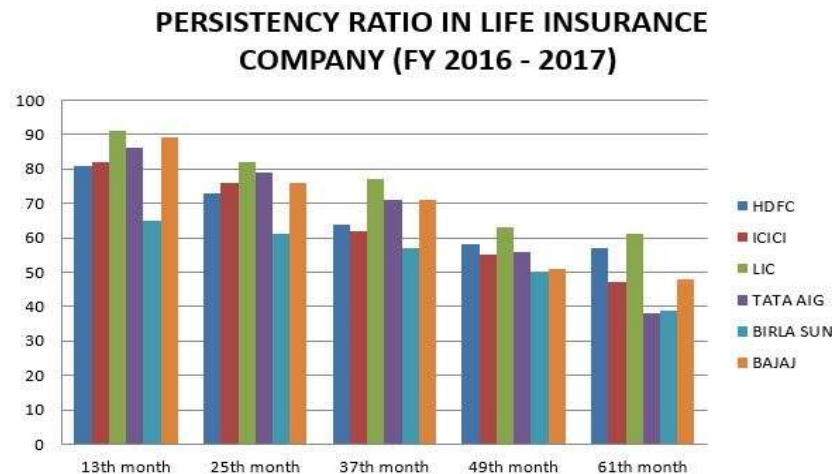


Figure 3: Bar chart represents the persistency ratio of various insurance industry Persistency ratio collected from various insurance industry for the period of 13, 25, 37, 49, 61 months.

**3. MARKET SURVEY:**

A set of 24 Questions are asked to the public and the Policy holders with sample size of 300 and it is evaluated by Cronbach Alpha test where the reliability of the question is 0.843 and it is inferred that the persistency improvement is major role in the insurance industry.



Figure 4 Pie chart represent the reason for reduce in persistency

The survey result that the agents are concentrated mostly to achieve the target without considering required services, and do not provides the correct information so the public are very difficult to the pay the renewal premium. with felt that it will be a major crises in future, especially the reduce the renewal collection in insurance industry made a huge problem, in order to reduce this issue a new alternate process should be developed for improve the renewal collection.

**C. ANALYZE PHASE:**

The purpose of Analyze Phase is to

- Generate alternative solution for each CTQ.
- Evaluate the alternative solution for each CTQ using a Solution selection Matrix.
- Combine the best parts of the improvement process to create a final solution

For successful completion of the Analyze Phase the following tools were used:

- Voice of customer (VOC)
- Pareto Diagram
- Cause and Effect Diagram

**1. VOICE OF CUSTOMER:**

We have conducted survey to the retailer and customers. Why persistency should be reduced in insurance industry. The customer voice is given below

- Agents Engagement
- Not proper Renewal Recovery
- Good schemes on New police and renewal
- Alternate Distribution channels are use
- Complaints should solve quickly at dealer
- Delay in Claim Settlement process
- More than Two Policy some offer should preferred

**2. PARETO DIAGRAM:**

A Pareto diagram is a type of bar chart in which the various factors that contribute to an overall effect are arranged in order according to the magnitude of their effect.

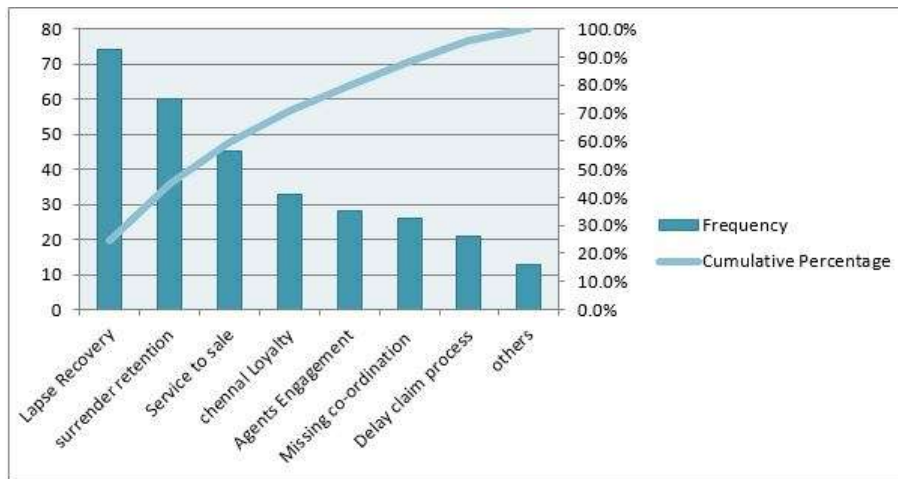


Figure 5 Bar chart representation the Pareto Chart

Table 3 The Pareto chart details

Count	74	60	45	33	28	26	21	13
Percentage	25	20	15	11	9	9	7	4
Cum %	25	45	60	71	80	89	96	100

In Pareto diagram, they discovered that five types of errors accounted for 80 percent of all errors. Instead of working on all error types, the focused its efforts on these five “Vital few” error types.

**3. CAUSE AND EFFECT DIAGRAM:**

Using a cause and effect diagram, the brainstormed 35 possible root causes for the high-lapse data. Potential causes included data quality, low agent engagement, poor incentives, and service issues. Subject matter experts and Life insurance customers provided stakeholder feedback during the root cause identification stage

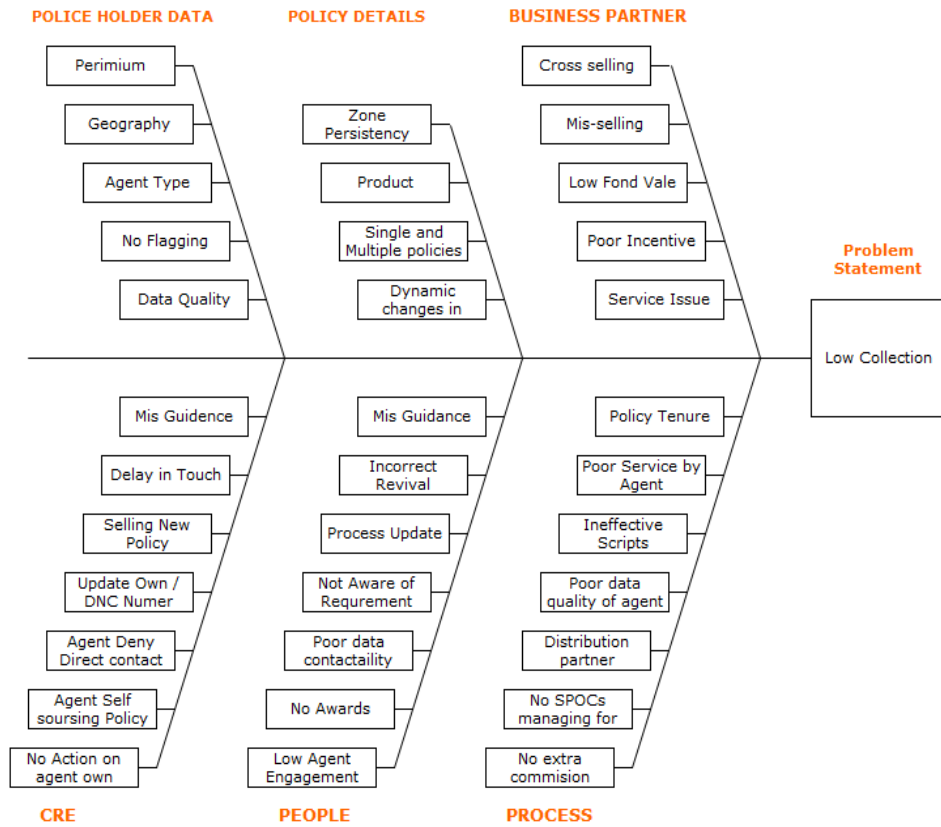


Figure 6 Represents the Cause and Effect Diagram

**D.IMPROVE PHASE:**

By brainstorming and benchmarking, which included site visits to other country organizations within the industry, and generated 23 possible solutions to the seven root causes and scored each solution against the criteria, on a scale of one to 10, to ensure only viable solutions were chosen. Fifteen solutions made the final cut. Solutions that scored higher than 550 on the Solution Selection Priority Number (SSPN) scale were selected for implementation.

**1. Seven Final Root Causes:**

1. Premium
2. Diversified geography
3. Policy Tenure.
4. Single and Multiple policy.
5. Agent Type.
6. Low agent engagement.
7. Disposition code

**2. Final solution:**

Table 4 Represents the Final Solution

S. No	Final solution	SSPN
1.1	Sending all premium data to agents	589
1.2	Send complete lapsed data to MDRT	653
1.3	Campaigns within zones	403
1.4	Send Text message 30 before the payment of premium.	742
2.1	Awareness session through agent meet	501
2.2	CRM heads on performance	407
2.3	Publish regular MIS to zone heads	591
2.4	Campaigns within zones	641
3.1	Calling prioritization	659
3.2	Calling prioritization	659
3.3	Allocation prioritization on policies	742
4.1	Flagging of active agent base in BP's calling	744
4.2	Sensitize business partners	515
4.3	Top location prioritization	499
5.1	Agent type	591
6.1	Certification	744

6.2	Contest	591
6.3	Pro-active sending data with proper flagging	405
6.4	MIS/Performance board	582
6.5	Agent engagement program	663
7.1	Scripts revision	733
7.2	Objection handling training	659
7.3	Contest	744
7.4	Special focus on positive disposition codes	454

This represents the proposed solution for the above mentioned 7 root cause from this root cause 24 possible solutions were found out, out of this 24 the best final solutions will be made based on solution selection matrix.

**SOLUTION SELECTION MATRIX:**

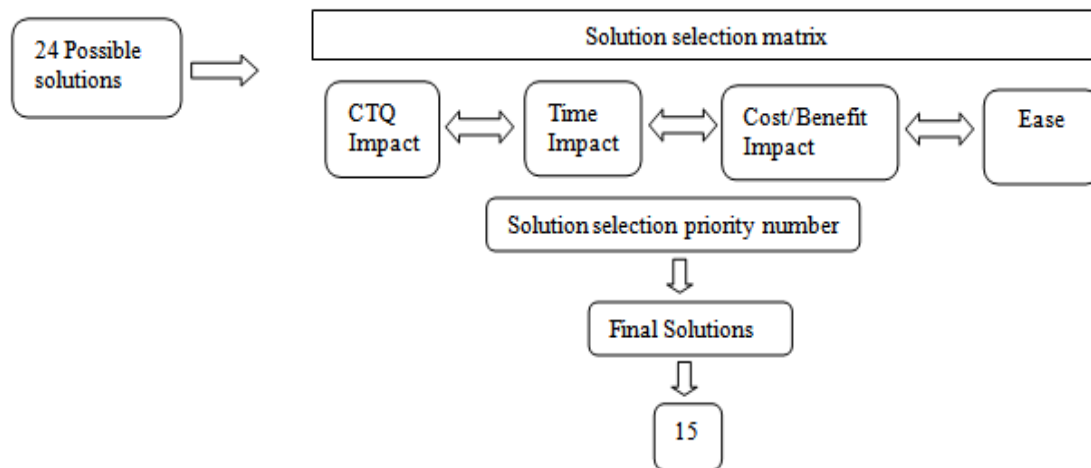


Table 5 Brief explanation of final solutions

Root Cause	Final Solutions	Brief explanation
Premium	1.1 Sending all premium data to agents	Make the lapsed data available to all active agents
	1.2 Send complete lapsed data to MDRT	Make the customized lapsed data available to all active agents
	1.4 Send Text message 30 before the payment of premium.	Send communication weekly to all customers whose premium is less than 10000 Rs
Diversified Geography	2.3 Publish regular MIS to zone heads	Send regular updated to four zone heads
	1.2 Send complete lapsed data to MDRT	Make the customized lapsed data available to all active agents
Premium tenure	3.2 Calling prioritization	Advise distribution partners to monitor calling as per prioritization matrix like call high premium and positive disposition people first
	3.3 Allocation prioritization on policies	Allocate base to distribution partners, with a prioritization like policy type, tenure wise, etc.
Single and multiple policies	4.1 Flagging of active agent base in BP's calling	Flag the active agent base, so that agent should call them first
Agent type	6.1 Certification	Provide YB/GB certification to those people, who were engaged via projects
	6.2 Contest	Initiate activities for motivating agents, employees to participate in collection activities
	6.4 MIS/Performance board	Publish regular dashboard for key stake holder on fortnightly basis
	6.5 Agent engagement program	Engage agents to work on their lapsed portfolio to earn more commission and new business.
Disposition codes	7.1 Scripts revision	Revision of calling script at call centre
	7.2 Objection handling training	Increase the scenarios in objection handling script

	7.3 Contest	Initiate activities for motivating calling agents to meet their target
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#### E. CONTROL PHASE:

In this we have successfully implemented DMAIC methodology in insurance industry and improved the persistency level. This report attempts to summarize the literature on six sigma application in services. It shows that there is a limitation in the spread of six sigma in services.

#### IV. CONCLUSION

The persistency improvement process in insurance industry should be designed by implementing SIX SIGMA concept this will help to improve the retention rate and collection percentage. Using various analytical tools to predict and understand key drivers which impact customer's premium-paying behaviour is imperative to survive in the fast changing and very competitive insurance industry. We believe a persistency improvement process can operate to everyone's benefit, by bringing insured and insurers together to meet their respective needs.

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