

Lean-Six Sigma Approach on Irrelevant Phone Calls at Accident and Emergency Department

INTRODUCTON

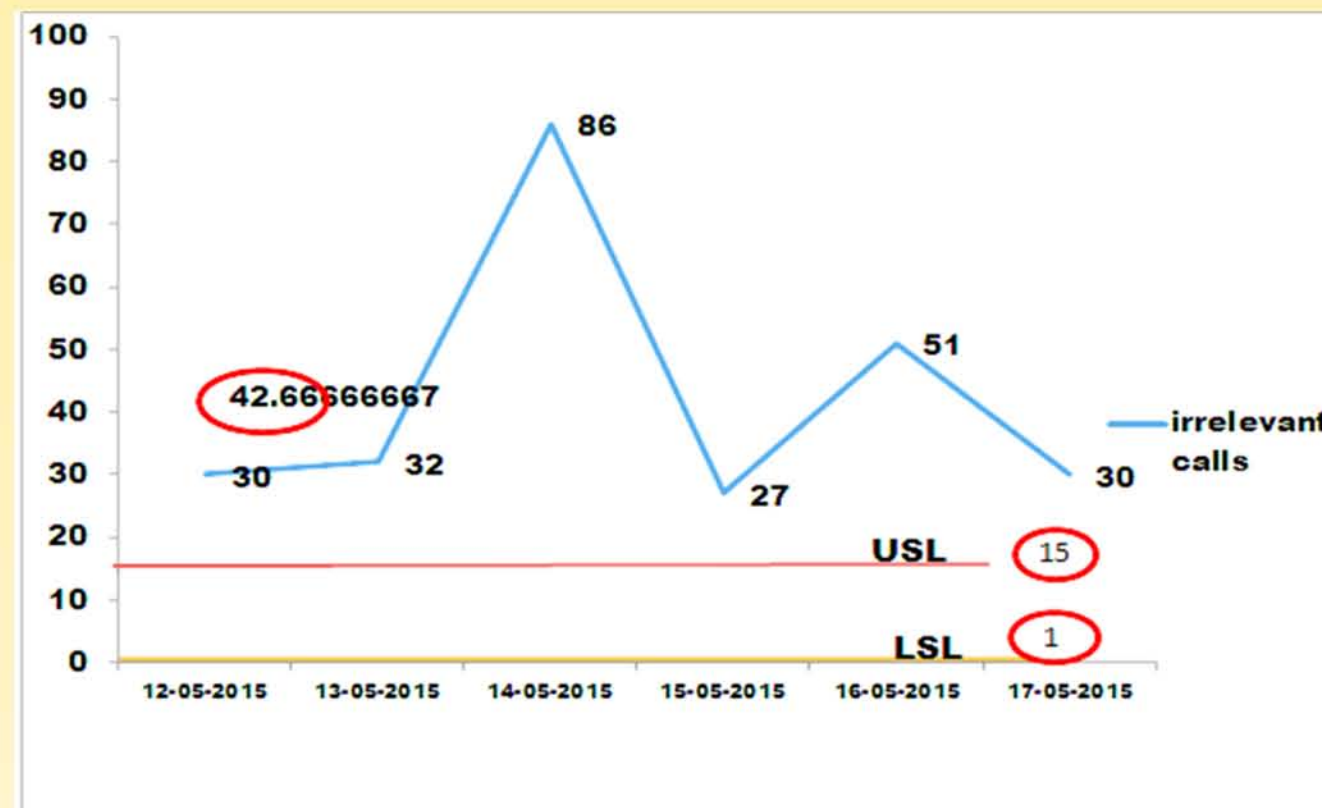
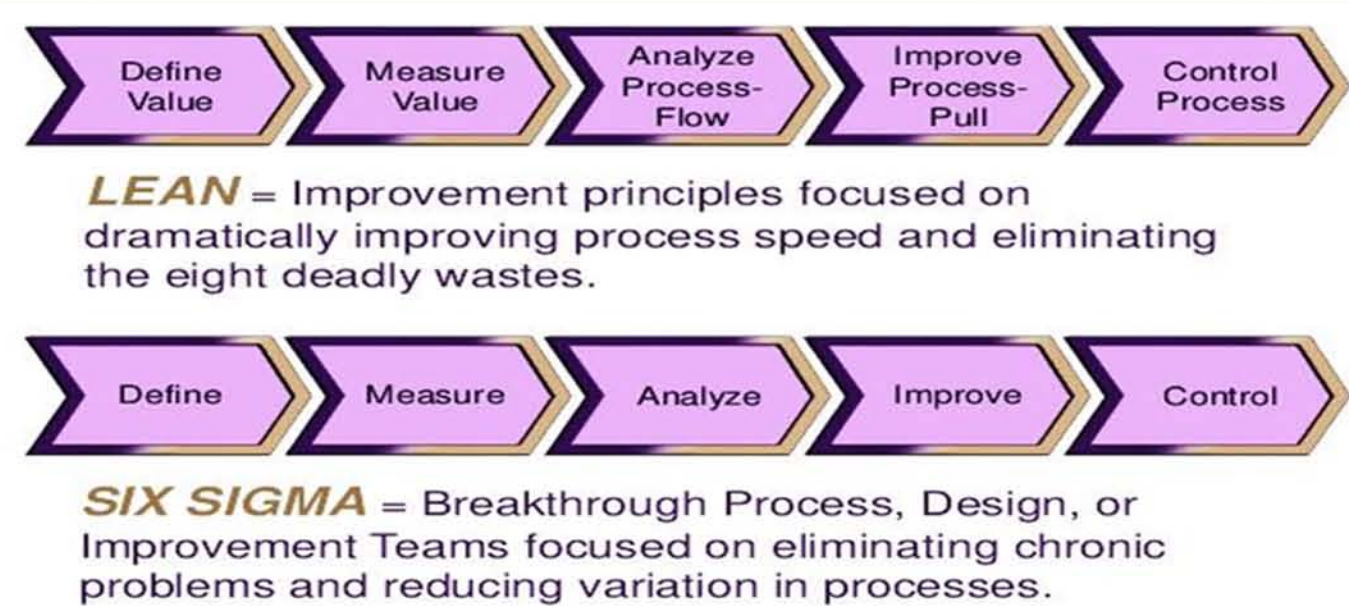
Lean Six Sigma:

Also called Lean Sigma, is a fusion of lean engineering with Six Sigma quality.

Usage - Lean Six Sigma Seeks to improve the quality of manufacturing and business process by:

- Identifying and removing the causes of defects (errors) and variation.
- Identifying and removing sources of waste within the process.
- Focusing on outputs that are critical to customers

Categories of Lean six-sigma approach are:-



Control Graph for average call/day A&E department

PURPOSE OF STUDY

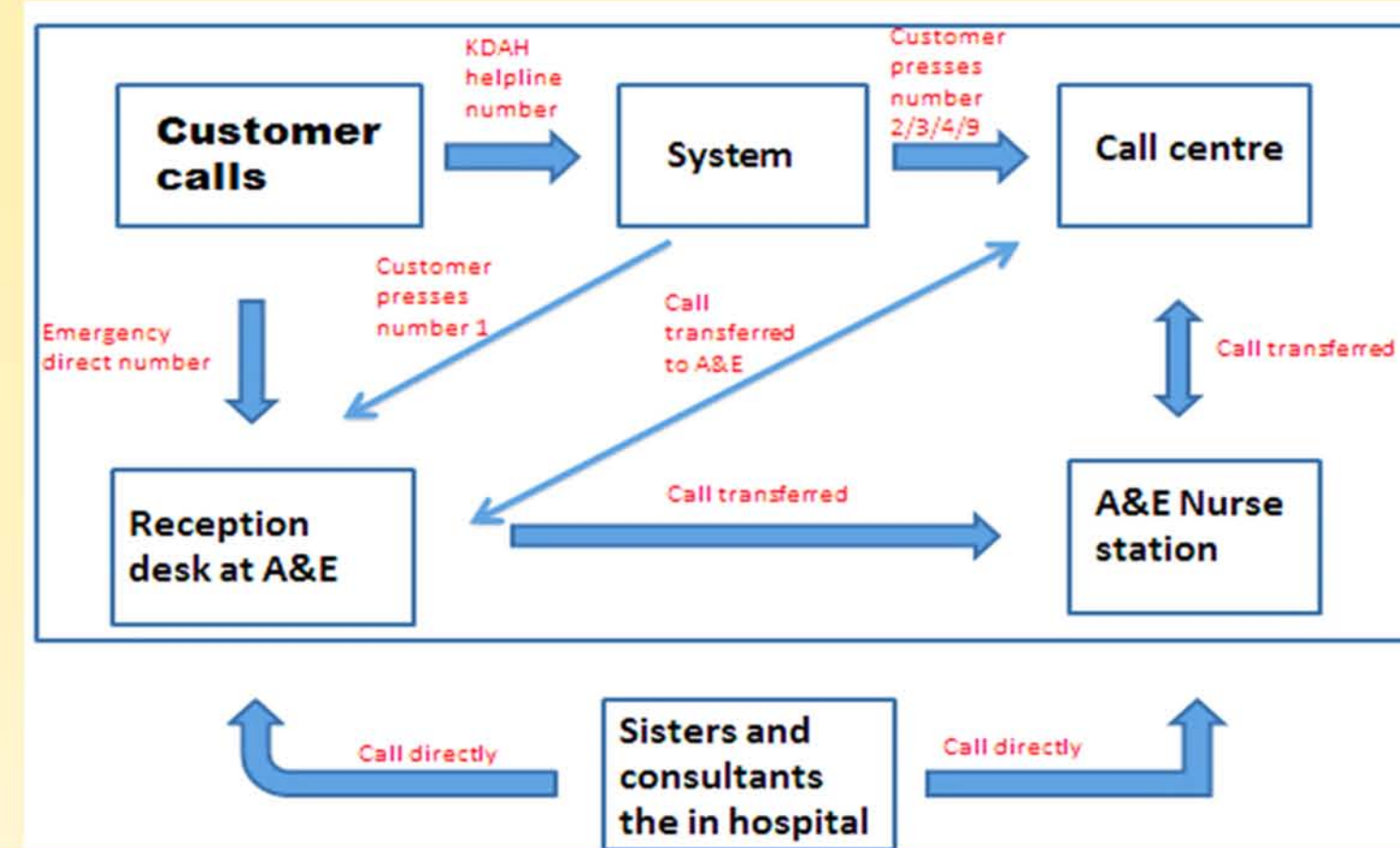
Why Lean six-sigma approach for reducing irrelevant calls at A&E department:

- Addresses the root causes of problems in the process of calls at A&E department.
- Recommends solutions and alternatives which should lead to more optimized call process.
- Enhance operational system, eliminate different type

2) Process Map / Map the Value Stream /Measure

A Process Map is an organized visualization of all the interrelated activities which combine to form a process.

A well understood process can be visualized easily and hence is easy to improve the process of calls received at A&E department and hence easy to work towards reducing the irrelevant phone call at A&E.



METHODOLOGY

1) Identify Value / Define Phase

- Project charter and appropriate scope
- Identifying stakeholders and team members
- Establishing team ground rules
- Planning and conducting a successful meeting

In this project, irrelevant calls are defined as those calls received at A&E (reception or nurse station) which were not directly related to functions performed by A&E department.

Critical to Quality	Voice of customer External Voice
Patient calls Directly for Enquiry through direct emergency number.	Call not picked by the receptionist
Call centre forwarded enquiry calls.	Phone always busy
Calls from sisters in wards for enquiries.	Internal Voice
	Calls from sisters in wards for phone numbers and about other enquiries.
Critical to process	Patient calls Directly for Enquiry through direct emergency number.
Lack of awareness and information about hospital process	Call centre forwarded enquiry calls.
Poor inter departmental Coordination	Consultant call from within the hospital for enquiry

Table showing Critical to Quality and Critical to Process indicators

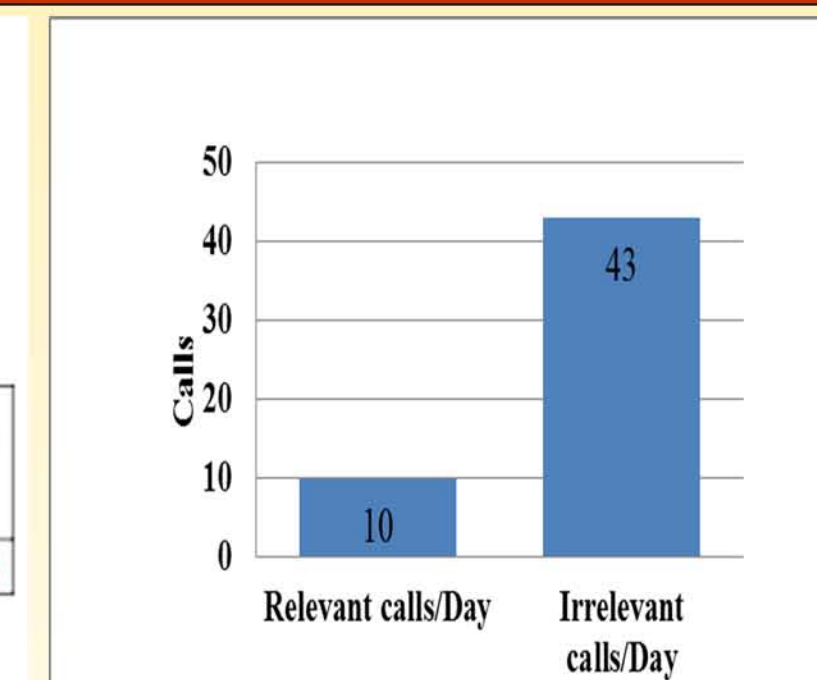
Voice of business

- Turn around time of picking calls high
- Lack of awareness and information about hospital functioning amongst staffs and consultants.

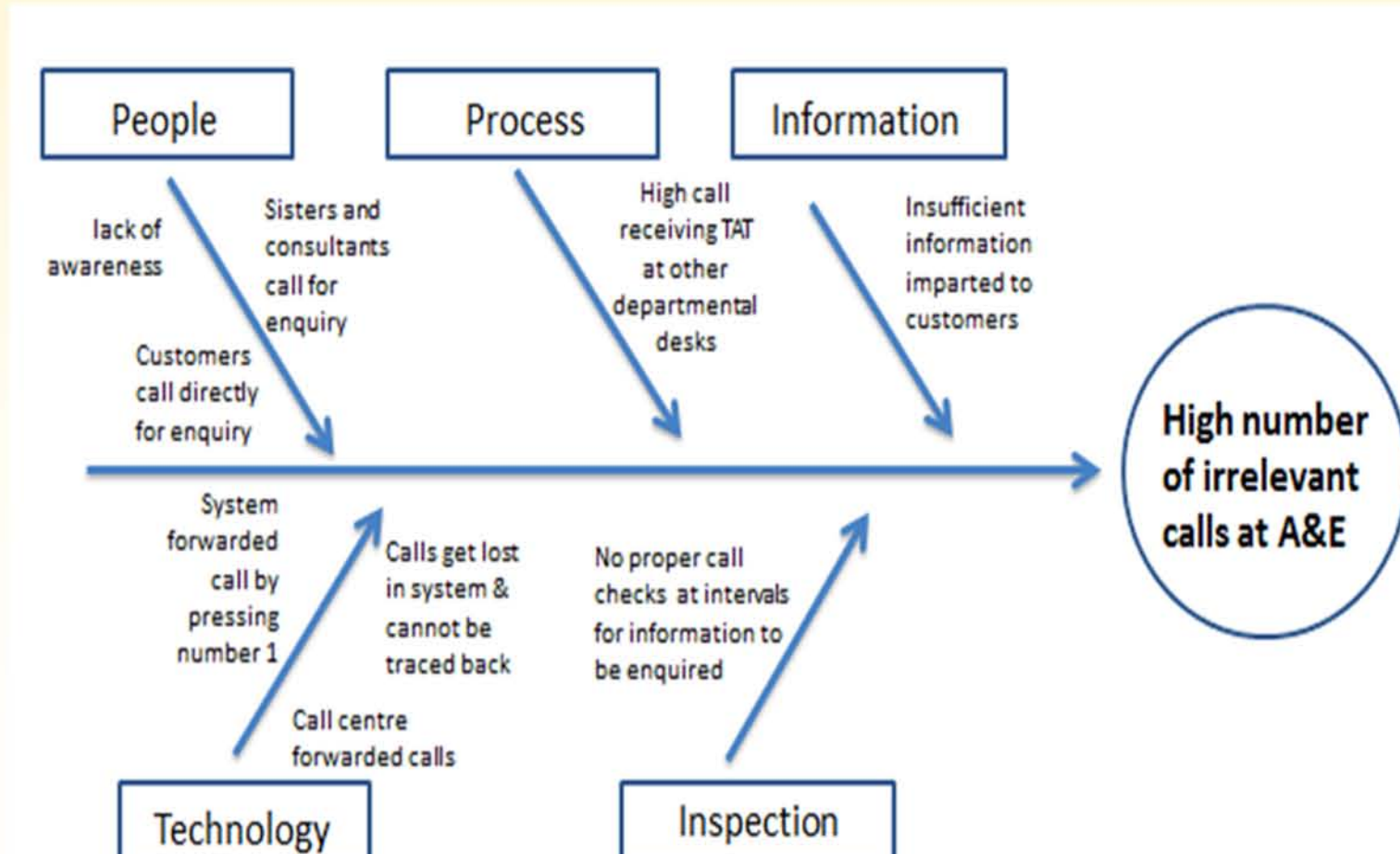
Output	Average	Standard deviation	CP
Calls	52.5	23.38161671	0.099793499

Output	No. of units	No. of opportunities per unit	No. of defects	DPMO	Sigma Level
Calls	53	1	43	811321	0.62

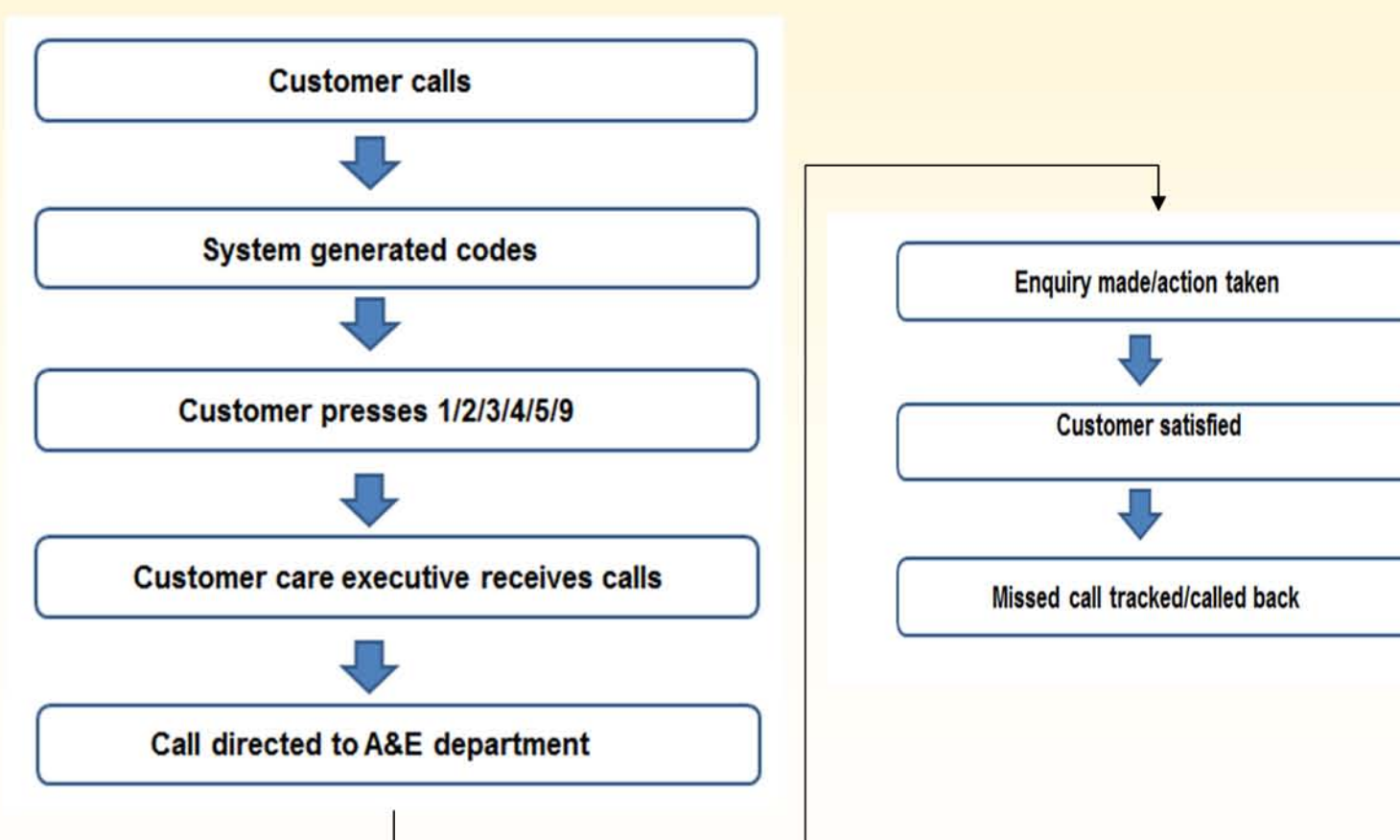
* Sigma level and CP of less than 1 indicates that the process is not capable to produce defect free outputs resulting in high customer dissatisfaction. Sigma level is the metric that indicates how well a process is performing. Higher the sigma better the process.



3) Create Flow / Analyse



Ishikawa diagram helped to find the cause and effect relationship between a numbers of factors responsible for high number of irrelevant calls.



Process flow after removing non-value added activities

OBJECTIVES

- To study the existing process of receiving calls to A&E department of Kokilaben Dhirubhai Ambani Hospital, Mumbai.
- To find out the current average of irrelevant calls to the A&E Department and sigma level of the process in place.
- To identify value added and non-value added activities in the process and suggest steps to control the irrelevant calls to A&E Department of the Hospital.

4) Establish Pull / Improve

This principle is about understanding the customer demand on the service and then creating the process to respond to this.

Area	Solution
1) Nursing	Routine training and awareness to the sisters about information gathering. Training to the sisters of A&E on information to be delivered. Every day on call list to be mailed to all nurse station with contact details across the hospital
2) Call centre/ CCO	Regular training to call centre personnel about the hospital processes and information to be imparted.
3) System	Increase the number of board line numbers so as to catch as many calls as possible. Prepare a system where it uploads on-call consultants name as soon as he punches his attendance in A&E department. A system to track the calls getting lost in the system.

KEY LEARNING

How to use lean six sigma approach.

Different tools of lean six sigma

Improving processes and operations by eliminating wastes.