

Tutorial 6 Lean and Quality

Objectives:

- Describe the Six Sigma Quality concept
- Define the term “lean” and “quality”
- Discuss ways of implementing Six sigma quality
- Describe the quality tools and their role in applying lean concepts

1. What is Quality?
2. What is Six Sigma?
3. Describe the key principles of lean operation.
4. The local telecommunication company provides service to the cities in Melbourne. The firm's current customers experience an average of 1147 dropped calls per week. The estimated loss time of 30s for each dropped call, which is roughly 9.56 hours per week. What is the company's current quality standard in terms of Six Sigma?

Table 1. Six Sigma Metrics

No. of Std Deviations above the mean	% of output that is defect free	Defects per million opportunities
2	69.15	308,537
2.5	84.13	158,686
3	93.32	66,807
3.5	97.73	22,750
4	99.38	6,210
4.5	99.865	1,350
5	99.977	233
5.5	99.9968	32
6	99.99966	3.4

5. You are the lecturer of Business Process Modelling. In recent years, the examination failure rate is around 15% -20% of the total enrolment. You would like to find out major factors that contribute to this failure rate.

Use Ishikawa diagram(s) to identify individual causes which may be due to human, process (or method), material, environment, management, etc.