

## LEAN MANUFACTURING: A REVIEW

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**Abstract** Lean Manufacturing is an efficient and fast growing approach in the world of competition. Lean Manufacturing is employed for the incessant removal wastes in the manufacturing to improve the efficiency and productivity. The main focus of the lean manufacturing is to satisfy customer demands for high quality and low cost. The technique not only identifies the reasons for waste but also helps in its removal through marked principles and guidelines. This paper focuses on discussing the concepts of lean manufacturing to improve the productivity, and quality and lower the cost of the product. Types of wastes are defined. The tools used to lower the waste are discussed.

**Keywords:** Lean manufacturing, tools, waste

### 1. INTRODUCTION:

Lean manufacturing is fast growing process to improve the productivity of an industry [1-4]. The lean manufacturing tools are not limited to industry only but are being used in many areas as shown in Figure 1. However, the scope is not limited these sectors only, it can be applied from a family to space company.

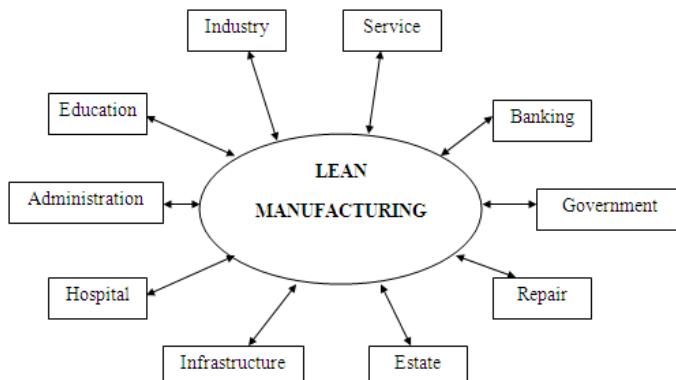


Figure 1: The main areas to implement Lean manufacturing

Lean Manufacturing is a commerce proposal to reduce waste in manufactured goods. The fundamental plan is to reduce the cost scientifically, throughout the product and fabrication development, by means of a succession of business reviews [2, 5-6]. The critical insight is that the majority of expenses are assigned when a product is designed. Often an engineer will identify familiar, safe and sound materials and processes rather than cheap, competent ones. This reduces project threat, that is, the cost to the engineer, while increasing economic risks, and decreasing income. Good organizations expand and evaluate checklists to review manufactured goods designs. At the organization engineering rank, requirements are reviewed with advertising, marketing and customer representatives to remove costly supplies [4]. Joint modules may be developed, such as versatile power-supplies or common automatic components or fasteners [18].