CHAPTER I

INTRODUCTION

1.1 BACKGROUND OF STUDY

Nowadays, the efficiency of a plant has influenced by its plant layout of the machine for operation. The influence of an efficient layout on the manufacturing function is that it makes it smooth and efficient. The operating efficiency, like the economies in the cost of handling material, minimize the production delays and avoidance of bottlenecks are all depend on a proper layout. Using Witness Software is one of the solution for solving the layout problem.

1.2 STATEMENT OF PROBLEM

The layout problem will usually occur in SME Companies and it is concern greatly nowadays since will affect the plant efficiency. The sign of lack in efficiency can be discovered when the machine is breakdown and the product need to take longer time to be produced, where with proper layout and allocation of time for maintenance for machine will avoid this problem. Sometimes the improper layout may cause a delay when the half finish product need to deliver to another department or machine in a midway, where the obstacle like other machine or things may have the half finish
product to make a long walk before deliver to the specific machines or department to be processed. So the study is to improve better plant layout as to eliminate bottlenecks and delay by using the WITNESS software simulation analysis.

1.3 RESEARCH OBJECTIVES

The objectives of this project are:

1) To identify and eliminate non value added (NVA) activities such as travel distance and bottleneck processes by using WITNESS Simulation Software.

2) To develop and propose an efficient layout which could increase company’s productivity and manufacturing efficiency.

1.4 PROJECT’S SCOPES

The scopes of this project are:

1) Use the data of cycle times and the capacity of the machine process half-finish product and run the simulation by using the WITNESS Software for real time simulation

2) The study will be carried out at the selected production line in MAMA BAKE Enterprise.

3) Sandwich bread will be chosen in calculating productivity and simulation in the efficiency calculation of the plant layout.