



اُونِيُوَرَسِيْتِي تِي كُونُو لُو كِي مَارَا
UNIVERSITI
TEKNOLOGI
MARA

NEW PRODUCT DEVELOPEMENT

TECHNOLOGY ENTREPRENEURSHIP (ENT600)

FACULTY & PROGRAMME : EM220
Group : EMD7M13
SEMESTER : 7
PROJECT TITLE : Analysis on laudry service
GOUP MEMBERS : 1. Abdul Zahier Bin Ismail 2014479262
2. Muhammad Syafiq bin khusairi 2014472882
3. Mohamad Nizar bin Mohd Naim 2015829592

LECTURER : Madam Hajjah Zanariah Zainal Abidin

Table of Contents

1.0	EXECUTIVE SUMMARY	2
2.0	INTRODUCTION	3
2.1	Problem Statement.....	3
2.2	Objectives of Product Development.....	3
3.0	NEW PRODUCT DEVELOPMENT	4
3.1.	Definition.....	4
3.2.	Classification of NPD.....	4
3.3.	New Product Development Process	4
3.3.1.	Research and Development	4
3.3.2.	Product Design/Features.....	5
3.3.3.	Concept Testing.....	6
3.3.4	Build prototype:.....	6
3.3.5	Test Marketing.....	6
4.0	CONCLUSION	7
5.0	REFERENCE	8
6.0	APPENDIXES.....	8

1.0 EXECUTIVE SUMMARY

The team has decided to build a training kit that would help workers and students to improve their skills in electrical wiring system to repair breakdown machines. The training kit have a pneumatic and programmable logic controller (PLC) system that help consumer in electrical wiring issue by troubleshooting problems with the machine. The product would be available for factories and universities in Malaysia.

2.0 INTRODUCTION

2.1 Problem Statement

Nowadays, most of factories faced problem in terms of maintenance of machine or equipment by their workers. The workers are not skilled enough to repair or fix the machine when breakdown.

2.2 Objectives of Product Development

- ❖ To assist industry to troubleshoot machine that breakdown.
- ❖ To train workers to repair machines that breakdown.
- ❖ To help workers in wiring system of pneumatic and programmable logic control (PLC) setup.

2.4 Methodology

The team uses different methodologies to gather information. This information has provided us a clear view to build a good product to the consumer. Our methodologies as follows;

- a) The team has done researching through internet for available journals, reports and studies for information and data about training kit.
- b) The team has done market survey on the online store such as, Alibaba, EBay and Amazon to obtain market price of available training kit.

2.5 Limitation

- ❖ The workers who are using the training kit would need a basic knowledge of electrical wiring system.
- ❖ The training kit would operate only one system at a time, even though there are two system implement on-board of training kit.

3.0 NEW PRODUCT DEVELOPMENT

3.1. Definition

- The team developed training kit for the industry and education for electrical, PLC and pneumatic training
- The training kit contain all component use in wiring and pneumatic.
- Including features
 - Safety features if malfunction of emergency occur
 - Cheap repairing cost
 - Latest model of component in wiring PLC and Pneumatic
- The training kit can be used to all kind of background of people but must be under supervision of a person with knowledge of electrical for safety of people and equipment

3.2. Classification of NPD

- TRAINNING KIT is a product to assist people to improve their electrical skill and pneumatic mostly use in industry and educations.

3.3. New Product Development Process

3.3.1. Research and Development

- Research and Development process
 - During my practical the engineers at HITACHI KOKI MALAYSIA SDN BERHAD most problem occur involving machine breakdown is involving electrical and pneumatic system.
 - Cost to send staff for electrical training are expensive.
 - Most training product in the market do not cover all PLC. Electrical component and pneumatic.
 - Based cases involving electrical where can refer at DOSH website for example: can be seen on the appendix
- Idea Screening
 - Safety in electrical and pneumatic -
 - Latest component and mostly use component of electrical, PLC and pneumatic.
 - Simple to understand and operate plus suitable for newbie to learn.
 - Crucial skill of electrical, PLC and pneumatic in industry and education.
- Market Survey
 - Market survey is mainly on industrial that use electrical, plc and pneumatic, it is general knowledge among engineers most manufacturing industry must have this system.
 - Next, our target is education place that involve with electrical, PLC and pneumatic for example course in mechanical and electrical engineering.