



**TECHNOLOGY BLUEPRINT**  
**BY SHOPPSTER TROLLEY SDN. BHD.**  
**(TURNITIN 11%)**

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## TABLE OF CONTENTS

CONTENTS	PAGE
<b>TABLE OF CONTENTS</b> .....	i
<b>LIST OF FIGURES</b> .....	ii
<b>LIST OF TABLE</b> .....	ii
<b>1.0 EXECUTIVE SUMMARY</b> .....	1
<b>2.0 PRODUCT OR SERVICES DESCRIPTION</b> .....	2
2.1 Product Description .....	2
2.2 Application of The Products and Special Features .....	5
2.3 Unique Features of Product .....	7
2.4 Present State of Development of the Product .....	10
2.5 Patents or Other Proprietary Features of the Product.....	12
2.6 Opportunities of The Expansion of the Product Line .....	13
<b>3.0 TECHNOLOGY DESCRIPTION</b> .....	14
<b>4.0 MARKET ANALYSIS AND STRATEGIES</b> .....	17
4.1 Customers.....	17
4.2 Market Size and Trends .....	18
4.3 Competition and Competitive Edges .....	22
4.4 Estimated Market Share and Sales.....	25
4.5 Marketing Strategy .....	27
<b>5.0 MANAGEMENT TEAM</b> .....	30
5.1 Organization of the Company .....	30
5.2 Key Management Personnel .....	32
5.3 Management Compensation and Ownership .....	35
5.4 Supporting Professional Advisors and Services .....	36
<b>6.0 CONCLUSION</b> .....	38
<b>7.0 APPENDICES</b> .....	39

## LIST OF FIGURES

Figure 1: Smartlock Trolley.....	3
Figure 2: Fingerprint lock buckle.....	4
Figure 3: Fingerprint lock buckle system .....	4
Figure 4: Application of fingerprint lock buckle seat belt .....	6
Figure 5: Market share before entrance .....	25
Figure 6: Market share after entrance.....	26
Figure 7: Organizational Chart.....	31

## LIST OF TABLE

Table 1: Product comparison with existing product.....	8
Table 2: Present state of development of the product.....	10
Table 3: Technology description.....	15
Table 4: Cost of Smartlock Trolley .....	18
Table 5: Market size within 3 years .....	19
Table 6: Potential annual growth .....	20
Table 7: The Strengths and weaknesses of competitors .....	22
Table 8: The competitive features between competitors .....	22
Table 9: Estimate market share and sales .....	26
Table 10: Key management roles.....	30
Table 11: Career highlights.....	32
Table 12: Duties and responsibilities.....	34
Table 13: Management compensation and ownership.....	35
Table 14: Supporting professional advisors and services .....	36

## 1.0 EXECUTIVE SUMMARY

Nowadays, most advanced technology is demanded by people and industries all over the world for various purposes as it saves their time, energy and make their life easier. Thus, an idea of innovation was introduced to improve the current shopping trolley in the market. Shoppster Trolley Sdn. Bhd. introduce an innovation of shopping trolley that uses fingerprint lock buckle seat belt named Smartlock Trolley. The objectives of this product is to reduce the injured cases and increase the safeness of the kids while using the shopping trolley.

Smartlock Trolley is easy to use and convenience for the users since it helps the customers to handle the kids while shopping. It replaces the push buckle seat belt with fingerprint lock buckle seat belt to improve the existing shopping trolley in the market. The fingerprint lock buckle seat belt uses a biometric capacitive fingerprint sensor scanner as a lock that attaches at the 5-points harness seat belt. It is to prevent the kids from unbuckling the seat belt by itself and exposes to the high rate of injury. Additionally, Smartlock Trolley also provides a child seat that can be adjusted as it gives more space and comfort. The price of the Smartlock Trolley is estimates RM 720 per unit. It is affordable as it uses high technology and high quality of materials. Hence, with these innovations of Smartlock Trolley, it can attract the potential customer to purchase the product.

Furthermore, Shoppster Trolley Sdn. Bhd. estimates the profit gain for the first year is RM 49 000 and will increase every year. The target market for the company are the supermarkets and hypermarkets in Selangor areas. Shoppster Trolley Sdn. Bhd. focused on these areas since it has many hypermarkets and supermarkets in Selangor. Then, within 3 years the company plans to expand the business to Kuala Lumpur, Perak and Negeri Sembilan areas. In addition, the company plans to expand the target market to the worldwide in the future.

Shoppster Trolley Sdn. Bhd. consists of five shareholders which are general manager, administrative manager, operation manager, marketing manager and financial manager. Each of the shareholders is assigned to their roles and responsibilities in order to achieve the objectives and objectives of the company. Thus, by using a blueprint it helps the company for better understanding and making decisions.

## **2.0 PRODUCT OR SERVICES DESCRIPTION**

### **2.1 Product Description**

Smartlock Trolley is a shopping trolley that provides fingerprint lock buckle technology at the child seat. It is especially designed for the shopper who brings kids to the hypermarket and supermarket. The idea of the brand name is based on the technology used for this product which is biometric capacitive fingerprint sensor scanner. The objective of this product is to reduce the injured cases and increase the safeness of the kids while using the shopping trolley.

The Smartlock Trolley is made of steel and the size is 1060mm (Length) x 600mm (Width) x 1030mm (Height) with capacity of 180 liters and 240 kg which is bigger than the usual shopping trolley at the supermarket. It has two different baskets which are the grocery items at the bottom and child seat at the top of the shopping trolley.

The Smartlock Trolley comes with a 5-points harness and fingerprint lock buckle seat belt that is placed at the child seat of the shopping trolley. It replaces the existing seat belt by providing high-tech performance to the customer while using the shopping trolley. Smartlock Trolley uses a biometric capacitive fingerprint sensor scanner that attaches to the buckle of the seat belt. It acts as a fingerprint lock buckle to prevent the kids from unbuckling the seat belt by itself. Furthermore, the biometric capacitive fingerprint sensor scanner can detect the fingerprint in less than 2 seconds and the sensor is waterproof which can easily be cleaned. Moreover, it has a high identification rate as it can respond to different finger conditions such as dry, wet, light texture or old fingers in less than 2 seconds. In addition, the fingerprint buckle uses a DC motor gearbox that helps to rotate the gear and unlock the buckle. It also uses a rechargeable battery that can recharge the fingerprint lock buckle using a USB cable. It takes an average of 2 hours to fully charge and can be used up to 10 hours. Thus, by using this technology it helps the shoppers handle their kids and increase their shopping experience.

In addition, the Smartlock Trolley has a 5-points harness seat belt that is easy to use and more secure than the usual seat belt in the market. The 5-point seat belt is easy to adjust and can be used in two ways, either a 5-point or a 3-point seat belt without using the waist straps. Moreover, high quality nylon webbing is being used for the 5-points harness seat belt since it is stronger compared to polyester. Besides, it is UV resistant and colorfast. Nylon material is also lightweight and water repellent which is easy to clean. Thus, by adding an extra point of seat belt, it is hard and prevent the kid from standing or going out from the trolley by itself.