



## **WRITTEN REPORT TECHNOLOGY VENTURE BLUEPRINT**

### **PINEGEAR**

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## **1. EXECUTIVE SUMMARY**

### ***1.1. Brief description of the business and product concepts***

The initiative of our business seeks to undertake motorcycle safety jackets that relate to the use of environmentally friendly materials that can reduce or balance the cost of Kevlar, which is pricey. On the other hand, it can maximize protection and lessen the impact of extreme injuries in case of vehicle crashes and collisions. Production and development of our high-performance motorcycle safety jackets include the incorporation of layers and plates composed with Kevlar and pineapple skin and leaf. These materials provide superior protection, comfortability, and are eco-friendly. The key objective and purpose of our business is to serve safety awareness and consciousness to the riders and motorcyclists. Additionally, by producing an innovative product that brings together cost-effectiveness and high quality.

Our product is designed to provide more flexibility and protection. To improve safety and preserve comfort, multi-layered Kevlar-PALF plates combine Kevlar with pineapple skin and leaf fiber (PALF) to create reinforced plates for impact and non-impact zones. When used as outer layers, PALF fiber and microfiber can offer excellent impact protection, abrasion resistance, and lightweight durability. Additionally, the design offers breathability levels that enhance airflow and guarantee mobility.

### ***1.2. The target market and projections***

The primary target market for our product is motorcycle riders who use motorcycles for various purposes, such as long-distance touring, sports, delivery services (food or parcel), and daily use or commuting. Motorcycle enthusiasts, clubs, and riding communities, as they require high-quality protective gear and safety awareness for themselves. Beyond casual riders, professional motorcyclists, including racers, stunt riders, and off-road adventurers who require advanced protection against extreme conditions and high-impact situations. Reinforced Kevlar and PALF fiber plates in our jacket can provide maximum durability and flexibility, offering enhanced protection without compromising comfort. Those are our target market, and we create this product for them in order to make them aware and give them additional protection in consideration of an increased number of accidents. By targeting this diverse range of riders, we aim to spread awareness about motorcycle safety and reduce the number of injuries and fatalities

due to road accidents. This is to empower riders with high-performance protective gear with a combination of safety, affordability, budget-friendly and durability.

The market projections significantly influence the key growth factors of the product. Businesses may use it to better analyze the potential demand, revenue opportunities and market trends for their product. In the upcoming years, the global market for motorcycle safety equipment is anticipated to expand. According to the statistics, the motorcycle accessories market in Malaysia would expand at a compound annual growth rate (CAGR) of 6.5%. At a compound annual growth rate (CAGR) of 2.61%, the Malaysian motorcycle market is anticipated to expand between 2025 and 2029. Thus, it demonstrated that motorcycles are used extensively and that there is a huge demand for them. Furthermore, motorcyclists account for about 65% of the 6,443 road accident deaths in Malaysia, yielding approximately 4,489 motorcycle deaths in 2023 (Chan, 2024). The greater awareness of road safety is being driven by the rising frequency of traffic accidents. Since our product is also composed of sustainable materials like pineapple skin and leaf fiber, it offers lightweight choices that possess low density, reducing the overall jacket weight. As a result, our product may create a lot of demand due to its increased mobility, comfort, flexibility, and high degree of protection.

### ***1.3. The competitive advantages***

PineGear offers several competitive advantages, such as superior protection, durability, light weight, comfort, market differentiation and cost efficiency. This is due to the fact that PineGear is a brand new innovative product that aims to provide more protection by adding pineapple skin and leaf and has various features that are quite durable and effective for a basic motorcycle safety jacket that typically uses Kevlar materials, which are well-known for their strength. Hence, PineGear is far superior to a jacket constructed just of Kevlar since it can offer high performance and safety, as well as being lightweight, comfortable, and many other features. Abrasion resistance may be improved by combining Kevlar with pineapple fiber, and the armor effect can be increased by using both materials as plates to add additional layer protection. As a result, it might increase the jacket's durability and protection.

Furthermore, combining these two distinct materials might result in a lightweight product that improves the user's comfort and mobility. Pineapple fiber's inherent moisture-wicking

qualities make it breathable as well, assisting in temperature regulation and sweat accumulation reduction. PineGear has the potential to differentiate itself in the market by offering eco-friendly substitutes for leather or synthetic jackets and utilizing an innovative and uncommon hybrid combination of materials. They can also lower production costs by using pineapple fiber and leaves that can be obtained from agricultural waste, while maintaining and balancing the cost of Kevlar usage.

#### ***1.4. The profitability***

Due to Malaysia's high demand for motorcycle use, PineGear may make a sizable profit because motorcycles are easier to access and may bypass congested areas. Consequently, the demand for motorcycle accessories can increase. Furthermore, a lot of products that come from renewable sources are sought after by customers, and sustainable trends have been more and more popular recently because they may reduce their adverse environmental consequences and be completely safe to use. Additionally, incorporating the fibers of pineapple leaves and skins with Kevlar might lower PineGear's production and raw material expenses because Kevlar is expensive. PineGear costs RM 800, which is significantly cheaper than the RM 1,000 price tag of regular motorcycle protective gear. Finally, depending on manufacturing capacity and sales volume, PineGear's profit margins vary from 33% to 34%.

#### ***1.5. The management teams***

The operations and business must be run by well-structured management teams in order for them to function effectively and appropriately. There are seven people in the management team. First, the general manager, who keeps an eye on the company's overall operations and strategy. An administration manager will then oversee compliance, human resources, and internal procedures. The operational manager will make sure that the sourcing of materials and production proceeded successfully. Pricing, financial planning, and budgeting are under the supervision of the financial manager. The marketing manager then oversees market positioning, branding, and promotions. Production and quality control are supported by the assistant operations manager. Finally, the assistant marketing manager assists with client engagement and campaigns. This system guarantees effective production, enabling marketing and financial sustainability throughout the creation of premium and environmentally friendly protection. This