

## Bio-Composite Sport Cycling Helmet

### TECHNOLOGY DESCRIPTION

This technology is a helmet with improved aerodynamics performance and less drag, produced using bio-degradable and non-toxic materials.

### TECHNOLOGY FEATURES

This technology meets aerodynamics requirement and it has good strength ratio. Besides that, the helmet is environmental-friendly, bio-degradable and non-toxic. It employs bio-composite as the material which are low cost, lightweight and environmentally superior alternative. It is a sustainable and green innovative product with low fabrication process cost.

### ADVANTAGES

- A sustainable and green innovative product.
- Optimization of the product shape make the product has better aerodynamic performance.
- The fabrication technique is low cost.

### INDUSTRY OVERVIEW

#### Prospect Industry: Sports Industry, Bicycle accessories

Global bicycle market can be segmented on the basis of product type (sports, road, mountain, and hybrid), technology, end user (men, women, and kids), and price (premium, mid-range, and low range). With high participation of women in the bicycle market, women bicycle segment in the global bicycle market is expected to witness a CAGR of 4.3% over the forecast period. Potential buyers for the sport cycling helmet may be among professional cyclists, Sport Cycling Society and individual cyclists. Bicycle sales are mainly distributed through specialty bicycle retailers, mass merchants, full-line sporting goods stores, outdoor specialty stores, and "other," which is comprised of a mixture of retailers (including Internet sales). To gauge the market potential for bicycle helmet, estimates about sales of bicycle were used. Globally, in 2014 global cycling market was valued at € 35.7 Billion. In the UK market for bicycle accessories was valued at £1.25 billion in 2014. The survey estimates that, around the world, 133.1 million bicycles (including e-bikes) were sold in 2013. The total value of that sale at retail level stood, at € 25.4 billion with average sales price per bike was calculated at € 191.



**Prof. Ir. Dr. Faizal Mustapha**  
Faculty of Engineering