

# **Design and development of a novel multifunctional travelling pillow**

**Mohammed ALGharably, Abdullah Albathi, Mohammed ALhoshan,  
Mohammed ALajlan, Ammar kachoua, Tamer A. Sebaey<sup>†</sup>**

Engineering Management Department, College of Engineering  
Prince Sultan University  
Riyadh, 11586, Saudi Arabia

<sup>†</sup> [tsebaey@psu.edu.sa](mailto:tsebaey@psu.edu.sa); [sebaey@hotmail.com](mailto:sebaey@hotmail.com)

## **Abstract**

Nowadays, traveling is becoming necessary in our life either for work, truism or for any other reason. Customers like to read during their travel and to make their journey as comfortable as possible. In the current work, the team is developing a multifunctional pillow that, in addition to its basic function, it can help the traveler for more comfort. The pillow will contain a light source to help travelers if they want to read books on the plane. Also, it will contain a headphone sticking to it so the traveler can listen to whatever he/she might wish. A detailed market needs and financial model is developed to support the decision of introducing this product to the market.

This work is accomplished as a course project of the Product Design and Development course that is running through the fall 2019 semester at Prince Sultan University.

## **Keywords**

Development, Design, Travelling pillow, Safety.

## **Biographies**

**Mohammed ALGharably** is a senior student at the Engineering Management Department of the Prince Sultan University. His main interest is the management of industrial systems as his studies focus on the Manufacturing and production and Management.

**Abdullah Albathi** is a senior student at the Engineering Management Department of the Prince Sultan University. His main interest is the management of industrial systems as his studies focus on the Manufacturing and production and Management. He is the student responsible for the IEOM chapter in Prince Sultan University.

**Mohammed ALhoshan** is a senior student at the Engineering Management Department of the Prince Sultan University. His main interest is the management of industrial systems as his studies focus on the Manufacturing and production and Management.

**Mohammed ALajlan** is a senior student at the Engineering Management Department of the Prince Sultan University. His main interest is the management of industrial systems as his studies focus on the Manufacturing and production and Management.

**Ammar kachoua** is a senior student at the Engineering Management Department of the Prince Sultan University. His main interest is the management of industrial systems as his studies focus on the Manufacturing and production and Management.

**Tamer A. Sebaey** is an associate professor of design and product at Prince Sultan University. Tamer's main research interest is the design, manufacturing, testing, modelling, and optimizing the composite structures for transportation application. His PhD studies were conducted at the University of Girona in Spain and got the best thesis award for 2013 through the whole university. The main focus of applications for his research is the aeronautical. However, other applications as the automotive, piping, infrastructures, etc., are also of interest to him. He was an assistant professor from 2013 – 2018 and then he got the promotion to associate professor, due to excellence in research, in 2018. Tamer is an active researcher with more than 40 articles on Scopus with h-index of 15 (As per Nov. 2019 Records). He is also an active member in the composite scientific research community with several presentations in international conferences and industries. He is also a recognized reviewer in most of the composite materials and structures journals. His current activities focus on the design of composites for more safe transportations.