Chapter  33
The Happy Feet Fashion Wearable Project: Co-Creation and Collaboration

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ABSTRACT
This case study explores the challenges encountered in collaboration and iterative prototyping by a UK design entrepreneur during the co-creation of a fashion wearable product: an interactive massaging shoe that combines artisanal handloom materials with conductive thread. The collaborative process and stages of co-creation are documented and constituted part of a Masters project in Entrepreneurship and Innovation at London College of Fashion. The collaboration between a fashion student and an electrical engineer, resulted in cross-disciplinary thinking to generate ‘workable’ ideas and product prototypes. Drawing on the co-design model, the case study maps the design evolution in fashion wearables, records the stages of ideation and documents the collaboration between artisans and engineers to develop the prototypes for this project. At each stage of the process, the challenges and barriers to concept and prototype realization are explained.

INTRODUCTION
This case study explores the challenges encountered in collaboration and iterative prototyping by a UK design entrepreneur during the process of idea generation for a fashion wearable product. The collaborative process and stages of co-creation were documented and constituted part of a Masters project in Entrepreneurship and Innovation. The project encompassed engagement between the fashion student and an (electrical) engineer and fostered the development of cross-disciplinary thinking to generate ‘workable’ ideas and prototypes of the product. New product development in this case study is contextualised in the avant-garde sector of fashion wearables and relies on close collaboration between designers and...
engineers to develop an appropriate technology to integrate a specific function into a fashion product. Fashion wearable technology is described by Seymour (2009: 15) as follows:

*It refers particularly to the electrical engineering, physical computing, and wireless communication networks that make a fashionable wearable functional.*

The key dilemma in the development of fashion wearable products is to ensure that the aesthetic and the functional values of the fashion product are sustained throughout the design. In some cases, the integrated function offers little intrinsic value to the product and is considered to be an unnecessary gadget or a gimmick by the user or wearer (Parkes, 2015). Although such products may incite novel interest in the short term, the long term value to the user is limited.

To contextualise the process of idea generation and collaboration, and identify the challenges encountered, a review of relevant literature is explored in the following section. Literature on the evolution of fashion wearables, multi or cross-disciplinary collaborations in the sector and the co-creation process are reviewed to evaluate common practices, identify potential challenges and problem-solving techniques to facilitate multi or cross-disciplinary engagement and expedite the development of new ideas. This case study may be of interest to both academics and practitioners in the sector as a means of establishing modes of practice to enhance the development of collaborative, multi or cross-disciplinary projects.

**REVIEW OF THE LITERATURE**

As mentioned above the literature review comprises three sub-sections: the evolution of the fashion wearables sector regardless of geographic context, the different forms of multi or cross-disciplinary collaborations in wearables and lastly the stages and common practices of co-creation. The evolution of the fashion wearables sector is examined in relation to the contribution of the leading designers in the sector and to identify the current and potential future directions for new products. Different forms and examples in practice of multi or cross-disciplinary collaborations in wearables are explored to discuss the leaders in this field and the specific challenges that ensue from different perspectives and approaches to the product concept, design and development process. Co-creation is examined to identify elements of common practice in product design and development, regardless of sector.

**The Evolvement of Fashion Wearables**

The term “wearables” was coined in 1991 by Steve Mann at MIT (Mann, 1996) and allowed for experimentation of design with electronics through the amalgamation of designers and engineers working collaboratively within an open culture of practice exploring the concept of “wearables” related to the body. Since that time, the focus for new products in wearables has been mainly in the sectors of health and fitness, which have been considered strong vectors for growth (Parkes, 2014) and the value of wearables is estimated to reach $20 Billion in 2020 (Gartner, 2016). The wearables sector is increasingly crowded with new products and developers are advised to create products that offer quantifiable and measurable value to solve a business or individual ‘pain’ (Osterwalder & Pigneur, 2010; Gartner, 2016). Products such as the fashion wearable activity tracker, Fitbit, offer measurable benefits to both the individual and health companies as people are increasingly in charge of monitoring and taking charge of their health.