

Analysis of the process of sport footwear creation

by Anna Barral

Tutor: Giuliano Molineri

Tutor of the company: Filippo Pavesi

The thesis is the result of a four month stage at the Fila S.p.A. in Biella, after three years of courses at the Diploma Universitario di Disegno Industriale (University Degree of Industrial Design) of the Polytechnical Institute of Turin.

The thesis begins with two documents, the first of them referring to the history of the company.

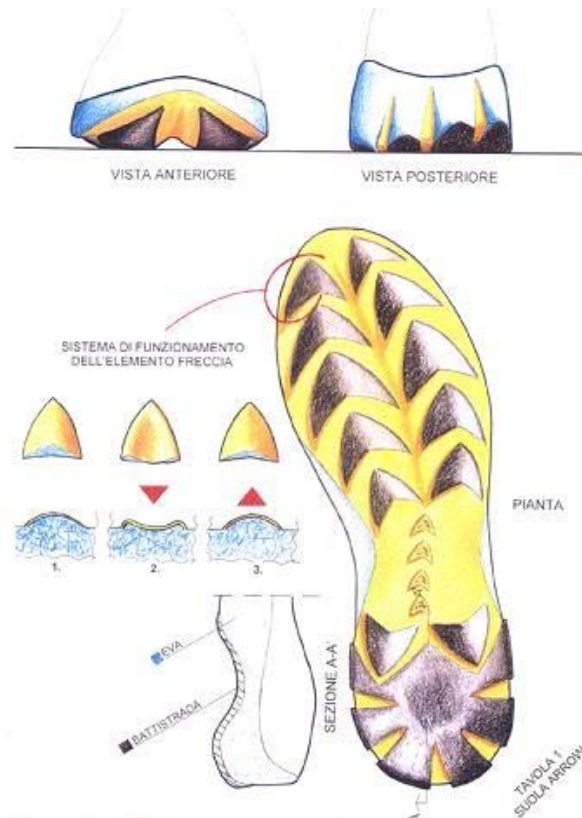
Knowing the history of the company has been very important, not only because it has given me the possibility of studying shoe design, but also because it has enabled me to get acquainted with the history and tradition of an Italian trade-mark which operates competitively with great multinationals on a world-wide market.

My tutor inside the company was Arch. Filippo Pavesi, who gradually introduced me to the different problems regarding sportsmanship footwear.

During the first month, the stage was developed as a voyage in the history of footwear, with an analysis of the innovations and the models which have distinguished them.

The subjects treated during this period constitute the arguments of the second document "Notes on the history of sport footwear" written by Arch. Pavesi.

A glossary explaining the specific terminology necessary for understanding the field follows this document.



The thesis in fact is not simply an explanation of the project, but wishes to investigate the footwear tradition, which has been developed by the company through years of experience, examining the work methodology, achieved.

The first chapter is an analysis of the different technological solutions introduced in sport's footwear: from the introduction of the first shoes in 1983 until to today, with the innovative invention of the Speed Tech System.

The subsequent chapter explores the dynamics of competitiveness. Examples of sports' footwear present on the market in the running category are examined, together with the different systems of cushioning, stability, and control, which are adopted.

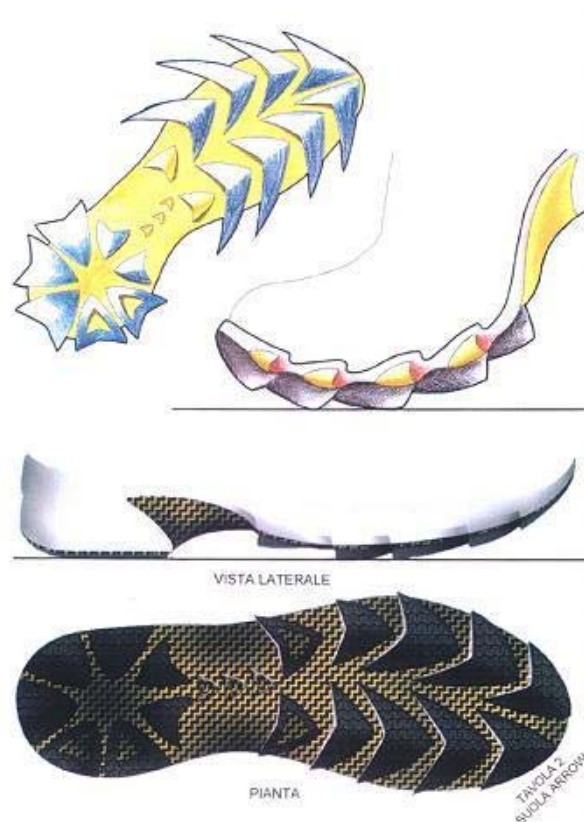
The third chapter examines the company's work methodology, the designing, production and management processes which are characteristic of the company and distinguish their products. Specifically I have analysed the process of development of the product.

The last chapter is an example of a creative project and treats the project, which I have developed inside the company.

This stage has given me the opportunity to live the whole process which characterizes the development of a product inside an important industry; developing my project, I have experienced the methodologies of work together with its times and objectives.

This chapter specifies the necessary steps to obtain the final project: the "Arrow" sole.

Biomechanical notions constitute the first part, since knowing the dynamics of foot motion are essential in the designing of footwear.

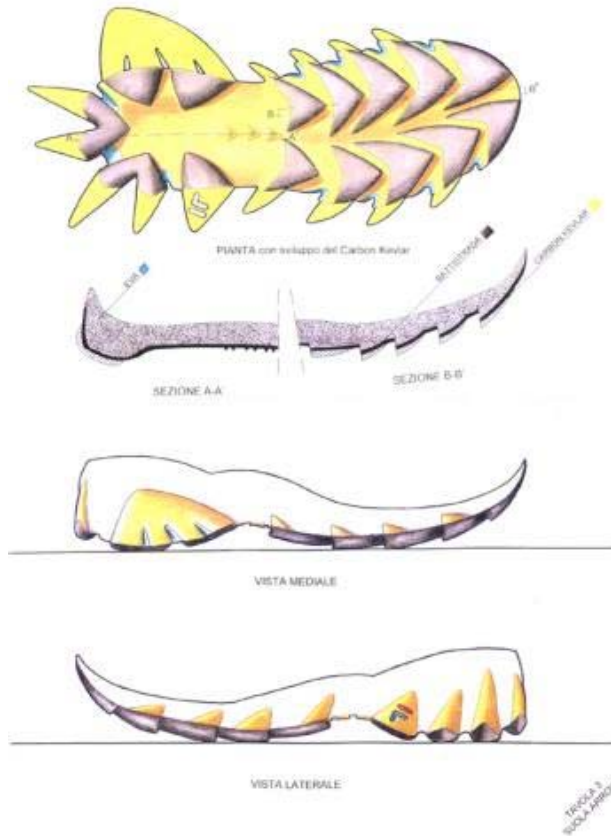


Afterwards I have analysed the parts which constitute the shoe: upper, midsole and outsole. I have analysed the materials, the performances and the know-how to produce them.

This background completed, I have started my design process.

The theme of the project is the SOLE and the technology is the SPEED TECH, co-moulding of EVA (Etil Vinil Acetate) with Carbon Kevlar. This technology allows the

realization of a light sole, the enhancement of the technological aspect and the improvement of the performance of the shoe, both at a performance and an aesthetic level.



Looking at footwear in department stores, my attention was captured by running shoes. The name “Arrow” refers to the front elements of the shoe. These elements work as pistons; when compressed, they store the impact energy and then they release it at the moment of take-off. The external front part is moulded to facilitate the flexibility of the forefoot. The back central zone is hollow to cushion more efficiently the impact of the heel on the ground. The external rear end is constituted by separate elements to help adherence with the ground and to distribute the impact force on more surface. The internal medial wing prevents hyper-pronation. The central part is stiffened by a series of “arrow” elements which form a backbone that prevents the foot from rotating excessively.

For further information:
e-mail: barralanna@ciaoweb.it