POLYTECHNIC OF TORINO
FACULTY OF ARCHITECTURE 1
Diploma in Industrial Design
Honors theses

Design of the adaptive sneakers
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This study is the result of the internship by the "**Shoe research and development**" division at the FILA s.p.a.

My aim was the design of a casual shoe, whose main characteristic should be a great adaptability to every kind of foot morphology within the dimension range considered (ex.: one shoes model for the 36-37-38 size).

The internship developed in 3 strictly connected phases:

1. ***Acquisition of the company Know-how:***

- I analysed all the useful ergonomic parameters for an effective design which takes into account every possible position of the foot, localizing the corresponding application point (elasticity, damping, stability, protection, wearing)
- I could learn which are the technologies and materials used by the company to create the shoes.
- I devoted a particular care in the use of anthropometrical statistic data coming from different European research centres concerning differences in weight, age and sex.
- I researched the already existing shoe models, whose design focus was the adaptability concept, applied to the shape, material and lacing.

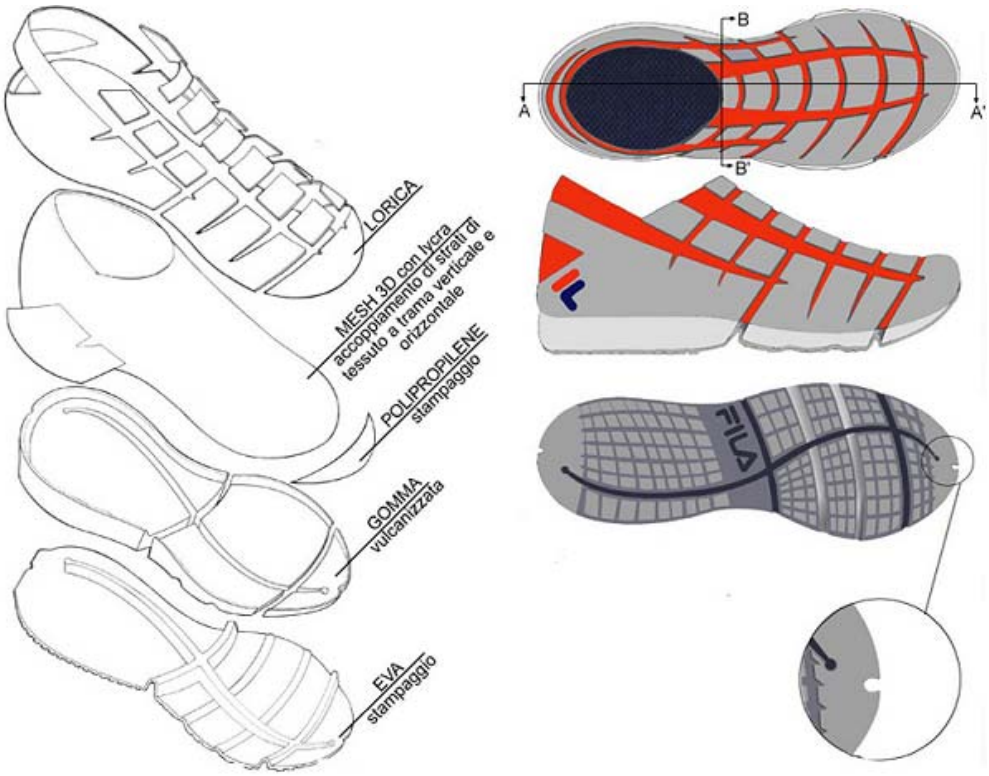
2. New experimental approach to the design:

- I began by the analysis of a various subject, whose foot length was the same but the width was different. They were asked to wear a special Lycra wire sock
- Subjects were photographed to all six part and thanks to the grid was possible to know immediately the part of more variation.
- The result have been graphically displayed in order to develop the final shape of the shoe

3. Convergence of the information

The experimental data and the grat company Know –how gave me a possibility to define a project, whose prototype was the realized.

- The project consist of a *Nylon Mesh sock*, which is covered in some part with *synthetic leather*; lawyerly the mid-sole in *EVA* is realized in five distinct part, whose were united to the *rubber* outsole. Thanks to some ruck the outsole can lengthen and widen.
- The aim was obtain an extension whithout to compromise the shoes stability., adding one support in *PP* subsequently and one previously.
- The prototype has demonstrate that the same shoe could be wear by subject of size 38 and subject of size 40, without a sensation of uncomfort.



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