3M and University of Milan Develop New Perspective on Biomimicry and Bodymapping. **By Kathlyn Swantko**

Creating an INSPIRE-ing Visual Tech Story

Product Development: As part of the Program, the students conducted trend research and created future scenarios.

Designing apparel for functional outdoor activities requires an understanding of fit and product application, in addition to selecting the appropriate component materials for the design. The development of today's technical sport-specific apparel demands that designers not only possess a keen sense of fashion and style, but also a thorough knowledge of both science, and engineering.

In recent years, biomimicry and bodymapping have been studied and integrated successfully into the design of sports-functional apparel to help the wearer achieve a cutting-edge performance, even when exposed to changing environments. Biomimicry is the science of evaluating how plants and animals survive in their natural habitats, and then applying similar methodology to the design process for functional apparel. Bodymapping is the strategic placement of component materials into the design and construction of the garment to provide the best possible movement and balance that enhances stamina or reduces fatigue for the wearer.

The 3M European Design Lab commissioned the Fashion School at Politecnico University in Milan to develop a new perspective on biomimicry and bodymapping that would visually communicate the unique characteristics and performance qualities of 3M technologies. This collaboration, called Project INSPIRE, challenged the students to research and utilize three 3M component materials: 3M Thinsulate Insulation, 3M Scotchliite Reflective Material, and 3M Scotchgard Protector. These products were then to be incorporated into the development of a single prototype garment.

The INSPIRE Project was conducted over a two-month period in May/June 2013. Participating students were in their second year of the Fashion Design course at Politecnico of Milan University. The class consisted of 50 students, divided into 13 teams that were challenged to research and interpret future trends, and integrate the 3M technologies, including its newest product, 3M "Thinsulate" Platinum Insulation, into their prototype garments.

Guided by the 3M Global Design Lab, 3M design managers presented seminars at the university every two weeks to help educate, review the students' progress, provide technical feedback, and answer questions.

What You See is What You Get Technically

Students developed concept generations in one-day workshops, held weekly, over the duration of the eight-week project period. The focus of INSPIRE was to gain new perspectives on how to visually communicate the unique characteristics and performance of the various 3M technologies. The students conducted lab experiments on the 3M component materials to create intriguing forms and new ways of showing the materials' values.

"We, at 3M, saw an opportunity to marry biomimicry and bodymapping design trends, which has opened up the creative doors to explore corporal spaces through science, beauty, and the truth of nature," explained Kayo Roehm, senior design manager-3M Global Design Lab. "This combination of inspiration serves as a new vehicle to bring the visual story of 3M's technologies to life."

Project INSPIRE resulted in better understanding the innovative visions of the younger millennial generation designer. 3M acquired the rights to five of the projects developed by the 13 student teams.

According to Roehm, "3M's short-term goal for Project INSPIRE was to tell the story of 3M's technologies not just through a scientific lens, but also through a filter of future forward creativity - inspiring designers, customers and end users. 3M's long-term goal is to continue to build on this idea via our network of talented and resourceful designers, cross-functional team members and external partners." ●

For more information on 3M's collaboration with the University of Milan, contact Kayo Roehm, kmroehm@mmm.com, (651) 737-9959.

Kathlyn Swantko, president of the FabricLink Network, created TheTechnicalCenter.com for Industry networking and marketing of specialty textiles, and FabricLink.com for consumer education about everything fabric.