

**OUTDOOR RETAILER**  
Styles for Spring '13

**MUST-HAVE APPS**  
Fingertip Technology

**SUPPLY CHAIN COSTS**  
Controlling \$ Pressure

**TREND SETTER**  
Under Armour Update

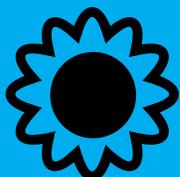
# TEXTILE INSIGHT<sup>®</sup>

TRENDS & ANALYSIS ON TEXTILE DESIGN AND INNOVATION

WWW.TEXTILEINSIGHT.COM

# POINTS AHEAD

**ENVIRONMENTALLY  
FRIENDLY**



**TEMPERATURE  
CONTROL**



**ULTRA  
LIGHT**



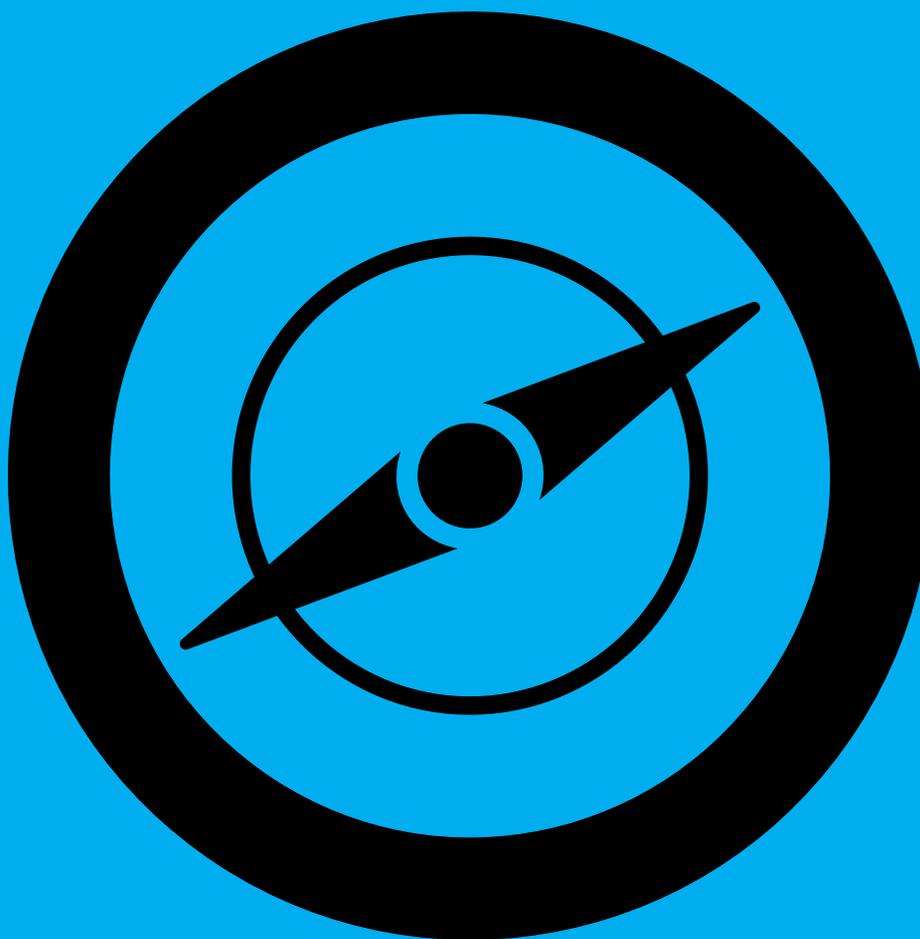
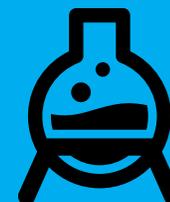
**WEARABLE  
TECH**



**SMART  
COMPONENTS**



**RESEARCH &  
DEVELOPMENT**



## Navigating the trail of fabric technology



# My Life History.

- 257 miles mountain biking
- 14 trips to the farmers market
- 29 kids' soccer games
- 1 run in with stranger's lefts
- 2 school field trips
- 2 unexpected downspouts
- 6 concerts in the park
- 1 worry-free ride
- 847 miles

Teflon® fabric protects me all day, walking, sunbathing, toasting and dry temperatures. This energy, too, warms me all day. Teflon® fabric is the best. For more information, visit [www.teflon.com](http://www.teflon.com).



The miracles of science.



©2008 DuPont. All rights reserved. The DuPont logo, DuPont, Teflon and Teflon are trademarks of DuPont de Nemours & Co. or one of its subsidiaries. All other trademarks are the property of their respective owners.

**TEXTILE INSIGHT**

textileinsight.com

**Editor-in-Chief**

Mark Sullivan  
msullivan@formula4media.com  
646-319-7878

**Managing Editor**

Emily Walzer  
emilywalzer@sbcglobal.net

**Art Director**

Francis Klaess

**Associate Art Director**

Mary McGann

**Contributing Editors**

Karla Magruder  
Suzanne Blecher  
Cara Griffin  
Kurt Gray  
Sandra O'Loughlin  
Kathlyn Swantko

**Publisher**

Jeff Nott  
jnott@formula4media.com  
516-305-4711

**Advertising**

Beth Gordon  
bgordon@formula4media.com  
949-293-1378

Jeff Gruenhut  
jgruenhut@formula4media.com  
404-467-9980

Troy Leonard  
tleonard@formula4media.com  
352-624-1561

Sam Selvaggio  
sselvaggio@formula4media.com  
212-398-5021

Jess Tendrick  
jtendrick@formula4media.com  
201-398-5021

**Production**

Michael Jacobsen  
mjacobsen@formula4media.com  
201-396-7005

**Business Manager**

Marianna Rukhvarger  
516-305-4709  
mrukhvarger@formula4media.com

**Subscriptions**

store.formula4media.com

**FORMULA4**  
MEDIA, LLC

**Formula4 Media Publications**

Sports Insight  
Outdoor Insight  
Footwear Insight  
Team Insight  
Textile Insight  
Running Insight  
Soccer Insight

PO Box 23-1318  
Great Neck, NY 11023  
Phone: 516-305-4710  
Fax: 516-305-4712  
www.formula4media.com

*Textile Insight*® is a registered trademark of Formula4 Media, LLC. ©2012 All rights reserved. The opinions expressed by authors and contributors to *Textile Insight* are not necessarily those of the editors or publishers. *Textile Insight* is not responsible for unsolicited manuscripts, photographs or artwork. Articles appearing in *Textile Insight* may not be reproduced in whole or in part without the express permission of the publisher. *Textile Insight* is published bi-monthly: Jan/Feb; Mar/Apr; May/Jun; Jul/Aug; Sep/Oct; and Nov/Dec.

**Subscriptions:** one year, \$24.00 (U.S. Funds) in the United States. All other countries, \$54.00 (U.S. Funds).

**Postmaster:** Send address changes to Textile Insight, P.O. Box 23-1318 Great Neck, NY 11023

**In Stitches:**  
NYC retail thrives on specialty shops like Freemans Sporting Club known for hand-sewn custom suits.  
See page 18

**06 In the Market**

Here comes OR Summer Market and we offer our take on trends and new tech for Spring '13. Kurt Gray writes about change on the horizon for specialty retail, while our sourcing guide Lizette Smook reviews textile industry stats to project major trends in globalization. Company news, eco-updates and what the recent Free Trade Agreement means for sourcing Colombia is all here.

**22 In the Studio: Footwear Materials**

This special section spotlights the latest developments in footwear materials and provides detailed information on performance benefits and trends driving design.

**28 Made in the USA**

New processing and marketing initiatives are doing a great job of promoting and supplying domestic fleece. Reports from the American sheep Industry are upbeat and the future looks bright for the newly formed Alpaca United organization.

**30 In the Studio: Apparel**

A new breed of outdoor clothing comes of age that has a technical DNA but high-end fashion focus. We call it "luxe-formance" and feature some of the latest looks.

**32 Technology**

Despite continued attempts to outsmart Mother Nature, the ultimate in fabric protection remains elusive. This season technologies take aim at harmful UV rays, nasty little critters and yes, even cell phone radiation.

**36 Weather Report**

What do the increasing record-breaking temperatures and weather extremes mean for the textile industry? How are designers reacting to climate change? You can find fabric forecasts here.

**38 A Performance Evolution**

Conversations with some of the pioneers and innovators who have played a role in the fabric revolution of the last 30 years give way to reminiscing about the early days, and commenting on where the industry goes from here.

**46 Strategies**

Textile execs are very attached to their phones, and why not with so many great apps available these days. Contributing editor Sue Blecher gets the scoop on industry favorites — both work-related and just for fun.

**48 Supply Chain**

Price pressure is probably the most important issue for brands in our post-recession supply chain, according to contributing writer Karla Magruder. Her story outlines contributing factors for this situation and talks costs with the experts.

**50 TrendSetter**

Contributor Sue Blecher catches up with Under Armour senior design director Nick Cienski who explains what is driving innovation at the powerhouse company. For Spring 2014, Cienski says we're going to see a lot more fun, creativity and a much fresher look.

## A Retrospective on Textile Performance Ongoing and to be Continued...



Into the category of “it seemed like a good idea at the time” falls this month’s cover story. Tracking down pioneers in the textile performance business was an enormously fun project and I completely enjoyed connecting with these folks who played a major role in the early days of development. Similarly, talking with today’s leading innovators was incredibly interesting, especially hearing their views on the state of material advancement going forward.

However, soon it became very apparent that there are a LOT of amazing people I could – and should – be in touch with for this article. My initial list of “people to contact” seemed puny after just one week of research. Names continued to be mentioned and my list of potential interviews was quickly getting out of control. I got emails suggesting ex-DuPont execs such as Jeff Mcguire, Bob Bednar and Kaye Crippen. Colleagues recommended Don Cartwright and Rick Ruddinger.

Others mentioned Chuck Hayslak and Sean Flavin from Polartec, Mike Blenkarn at Arc’teryx and Textronics CEO Stacey Burr. Jerry Miller’s name came up several times for his leadership at United Knitting, And on and on. My simple story idea on performance evolution became, like the market itself, complex.

Armed with this roster of textile wizards, the plan now is to continue the story with a series of follow-ups, including “where are they now” type profiles, as well as “future forecasters.” If you yourself are a contender, or know of an industry visionary, or would like to know more about a key player in our business — fire away. I welcome all story suggestions and you can find me at [emilywalzer@sbcglobal.net](mailto:emilywalzer@sbcglobal.net).

In the meantime, this issue is jammed with information on topics ranging from Spring ’13 trends to sourcing advantages both at home and abroad. A theme to keep in mind as you are paging through articles is how advanced and diverse our industry has become.

Personally, in just the past month my daily planner has included an extremely pleasant morning visiting an alpaca farm in rural Connecticut to a few days later attending an entertaining evening extravaganza at the Waldorf

Astoria hotel in mid-town Manhattan in celebration of the Free Trade Agreement with Colombia. Two very different worlds for sure, but both capture important movements in fibers and fabrics today: re-thinking domestic production with an eye on natural fibers and new, competitive sourcing locales.

Also notable are stories on climate change, favorite apps, new specialty retail business models, recycle carbon fiber research, extraordinary supply chain price pressure, and Under Armour. All of which chart a new course for design and development as well as market strategies and manufacturing. Dressing for a new world order of temperature extremes is top of mind for many this July, especially as wild fires burn in Colorado and sections of the country swelter under triple digit heat. It’s not surprising that cooling technologies are launching.

Finally, this summer marks the 30th anniversary of Outdoor Retailer, a fact that gives some of us pause to consider the changes and the progress of this market. If you attended the very first OR, a story has your name on it for an upcoming issue! ●

*Emily*

**Concept III**  
Textile-Based Product Solutions

The source for outdoor/active textiles

ORSM12 Booth #38051  
[www.conceptiii.com](http://www.conceptiii.com)

Environmentally responsible textiles that reinvent manufacturing with the earth in mind.

**Kingwhale**  
Low Impact Technology™  
Environmentally Responsible Textiles

U.S./Canada: [info@conceptiii.com](mailto:info@conceptiii.com) 732.530.1976 Europe: [info@conceptiii.co.uk](mailto:info@conceptiii.co.uk) +44.1756.702100

# LET'S GIVE MORE BOTTLES A REPREEVE.



Out of the landfill...  
into Repreve recycled fiber...  
and into your products.

When you choose Repreve recycled fibers,  
you're helping to keep more bottles out of  
the landfill. To create a reprieve for the planet.

Globally, we're using more than 900 million  
recycled plastic bottles this year. Do your  
part. Please recycle. Choose Repreve.

REPREVE  
RECYCLED FIBER BY UNIFI



# A Cool Front: The Latest Lightweight Materials that Temperature Regulate

It's cool to be cool. That's the premise of textile advances for the season ahead with several brands introducing new cooling technologies that address the heat factor — both for the athlete's micro-climate as well as the micro-issue of a worldwide warming trend.

For example, next spring Columbia Sportswear will roll out Omni-Freeze ZERO, a sweat-activated cooling technology that will be featured in a collection of apparel as well as select footwear styles. The technology launch will also include apparel from Columbia's sister-brand Mountain Hardwear, though Mountain Hardwear's name for the technology will be Cool.Q ZERO. Columbia's pitch for this latest technology introduction touches not only on the product line itself, but also on the issue of climate change and rising temperatures across the globe. (For more on how industry designers are reacting to climate change, please see our story on page 36).

Lightweight is another "hot" topic. The light and fast trend continues to evolve and set new standards with performance products that barely tip the scales. For example, GE is introducing eVent DVL (direct venting lite) waterproof fabric, a new textile technology and fabric line engineered for lightweight, high performance rainwear for outdoor and aerobic activities. In addition, Cordura Ultralite fabric technology is lessening the load within the travel luggage category.

## Here are details on some of the latest innovations:

GE's new eVent DVL fabric is an unlined laminate that features a protective print applied directly onto eVent's proprietary waterproof ePTFE (expanded polytetrafluoroethylene) membrane. The print — a repeating web of



**GE eVent DVL: Technology launches with Rab's Maverick Jacket designed for the all-round outdoor enthusiast.**

outlined triangular shapes — provides a durable protective screen for the membrane. The membrane technology, with its millions of tiny pores, allows "direct venting" of the body's heat and moisture through the fabric, yet is waterproof from the outside. The eVent DVL membrane is laminated to lightweight face fabrics for use in jackets, pants and other products.

"eVent DVL fills the market's continuing demand for light waterproof breathable fabrics," says Glenn Crowther, product line leader for eVent fabrics. "The technology in eVent DVL waterproof fabric improves upon the performance of what are commonly called 2.5-layer fabrics."

Rab is the launch partner and will introduce the Viper jacket for men and the Maverick jacket and pants for men and women for Spring 2013.

ThermoCool duoregulation fiber from German fiber producer Advansa is now available to the American market. In cooperation with FilSpec, the exclusive yarn spinner in the Americas, spun ThermoCool

will be available from FilSpec's Sherbrooke, Canada and Ellerbe, North Carolina facilities.

ThermoCool has been specifically designed to optimize the body's natural thermo-regulating capabilities through a combination of unique fibers with hollow core and channeled cross sections that provide evaporative cooling or thermo-buffering according to the body's needs.

Columbia's Omni-Freeze ZERO performs via distinctive little blue rings, embedded and visible in the fabric, which contain a special cooling polymer. When exposed to sweat or moisture, these rings actually swell (similar to goose bumps) creating an instant and prolonged cooling sensation, according to the company.

"Historically, outdoor and athletic brands have looked at sweating as a problem ... something to be wicked away with so-called 'technical,' decades-old polyester fabrics," says Mick McCormick, executive VP at Columbia. "We see sweat as a renewable resource that will allow athletes, outdoor enthusiasts or anyone that spends time in hot, humid conditions to sweat smarter, staying more comfortable."

Nilit Breeze (patent pending) specialty yarn is now offered as a performance fiber for sportswear, hosiery, underwear, shapewear, socks, outerwear



**Cordura Ultralite: Ultralite fabric is featured in the Spring '13 Travelling Light collection from Sea to Summit.**

and workwear. Available in specially textured and flat nylon 6.6 yarns, Nilit Breeze fabrics cool wearers by almost one degree Celsius in comparison to fabrics knitted with standard fibers.

The yarn's cooling effect comes from a special cross-section, the insertion of an inorganic additive in the polymer itself and a unique texturing process. This combination gives fabrics very efficient ventilation capabilities and UV protective properties.

Teijin Fibers' "anti-sweat" polyester fabric offers enhanced absorption, quick drying and prevention of both chill and stickiness and will launch for all-season sportswear targeting the Fall/Winter 2013 and Spring/Summer 2014 seasons, as well as for casual wear and uniforms.

The new polyester fabric has a three-layer structure consisting of an inner, fully hydrophobic layer of moisture-repellant polyester fibers, a middle moisture-absorption layer and an outer moisture-diffusion layer. Once sweat has been absorbed by the middle layer, the inner hydrophobic layer keeps moisture from returning to the skin to prevent the wearer from becoming chilled, and to prevent the fabric from sticking to the skin even when perspiring heavily. The capillary-type pump action of the three-layer structure quickly absorbs and diffuses sweat to promote fast drying.

The water-repellant fibers incorporate a repellent agent in the raw yarn, unlike surface-treated fibers, so high performance is maintained even after repeated washing.

According to the company, this new polyester provides comfort even when perspiring greatly and expands upon the moisture-absorption and quick-drying functions of fabrics now on the market. ●



## IN THE MARKET | OUTDOOR RETAILER PREVIEW

Niche Collections bloom for Spring '13 with Diversified Styles, Fabrics and Price Points

# Outdoor & Beyond

The boundaries for what was commonly considered “outdoor” have expanded in recent years and judging by the landscape of this Summer Market the view is about to get even broader. With an inflated New Exhibitor Pavilion brimming with more than 300 new vendors there’s likely far more than hiking shorts and waterproof shells on display in Salt Lake. Even the hard-core brands holding court inside the Salt Palace are looking further



**Patagonia:** Houdini Board Short

afield with Spring '13 product lines that defy conventional outdoor definition. Surfing, anyone?

This wider-lens approach to outdoor carries over to fabrications. Next season brings a bounty of fibers, weaves and knits, laminates and coatings. There are naturals and synthetics, organics, bio-based and recycled materials. Even traditional cold-weather textiles are becoming acceptable for Spring/Summer collections with the latest lightweight insulations and wools at the forefront.

Price points are also part of this trend. Despite some recent reduction in raw material costs, outdoor goods have reached new territory at the cash register. High-end goods abound with triple digit price

tags typical for general goods.

Yet for all the diversification entering the marketplace, performance remains rooted in outdoor. Textiles may look and feel new and different but these materials continue to achieve high levels of function. Even the whisper-weight lifestyle garments get the job done when it comes to providing comfort via moisture management, strategic breathability and stretch.

### Specialty Niches Broaden Base, Provide Growth Opportunities

For years and years athletes have worn their “outdoor” clothes for all sorts of active endeavors because the clothing provided versatility and all-purpose function. Stretchy sportswear goes to yoga class, paddle shorts go for a run. As brands mature, designers are bringing their expertise to niche market segments. Patagonia’s first official yoga collection makes its debut and features a clean style, high-quality and unrestricted mobility. The company makes a point of explaining that the new line was “Created by and for Patagonia’s climb and surf ambassadors, who maintain a dedicated yoga practice on the side.” The col-



**Smartwool:** PhD Run Short for men

lection includes both synthetic and natural fabrications.

“Yoga is the biggest market opportunity since dresses for Patagonia,” notes Helena Barbour, business unit director for sportswear. “The customer is looking for styles with great



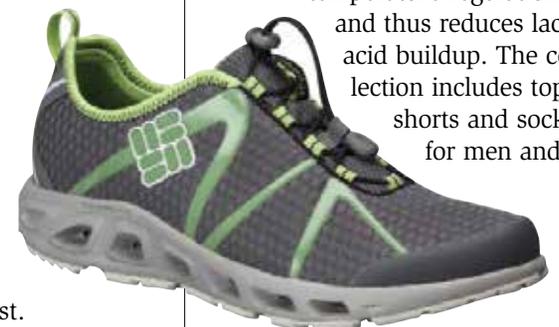
**Bergans of Norway:** Humle Technowool Jacket

fit, and high-quality fabrics that crossover from yoga to street. Our collection fits that bill.”

The entirely new yoga collection boasts nine top options, and six bottoms. Textiles included soft, organic cotton, Tencel, performance polyester and a nylon/spandex blend. The yoga collection is recyclable through the company's Common Threads Recycling Program.

Patagonia’s board short collection is also of interest. At the top of the line is the new Stretch Houdini Board Short, with a suggested retail price of \$119. Made in the same factory as the company’s most technical alpine jackets, the Houdini’s sleek design features super-lightweight polyester with two-way mechanical stretch and a contoured pattern, which retains the fabric’s functionality. Fully welded flat seam construction speeds dry time.

Keen extends the outdoor concept to “anyplace without a ceiling.” For Spring/Summer 2013 the company introduces Keen.CNX, a low profile, lightweight model. Designed to feel like a natural extension of the foot, each of the 20 Keen.CNX styles weighs 10 ounces or less. “City, trail or water, the new Keen.



**Columbia:** Powerdrain with Omni-Freeze ZERO

women. The short liners are also Merino .

After “re-launching” the company in North America at OR Winter Market, European outfitter Bergans of Norway has an expanded 2013 Spring/Summer product line. The new Humle Technowool Jacket is “built for most of the calendar” and is made with lightweight, soft 45 percent wool/35 percent poly/16 percent polyamide blend. The Humle, for both men and women, is “perfect for travel, urban and mountain living as a standalone piece or for layering,” according to the company. The suggested retail is \$189.00. ●

CNX collection is ready to play on all terrains,” says Ron Hill, VP-merchandising.

The Adidas Outdoor’s men’s Terrex Hybrid Primaloft Jacket new for Spring '13 also features versatility in a cross-seasonal design. The product is a good example of the three-season approach being adopted by many designers, ushering in the use of lightweight performance insulations for warmer weather product lines. A 40 gram Primaloft Sport insulation is featured in this garment.

While Merino hosiery has made great strides for all-year wear, Merino now shows up in almost every product segment. SmartWool has a new Run collection for Spring '13. According to the company, wearing Merino next-to-skin aids

temperature regulation and thus reduces lactic acid buildup. The collection includes tops, shorts and socks for men and

THE  
OUTDOOR  
CONCEPT  
EXTENDS TO  
ANY PLACE  
WITHOUT  
A CEILING

**HELD CAPTIVE IN  
A HOT, HUMID  
ENCLOSURE FOR  
16 YEARS**

**LIBERATED  
BY NEOSHELL**



Introducing the most breathable waterproof fabric ever, Polartec® NeoShell. Created with and for athletes like Jeff Haberman, it liberates outdoor enthusiasts from sweat, chafing, and chills, and is now available in the world's best apparel brands. Be liberated at [NEOSHELL.COM](http://NEOSHELL.COM)

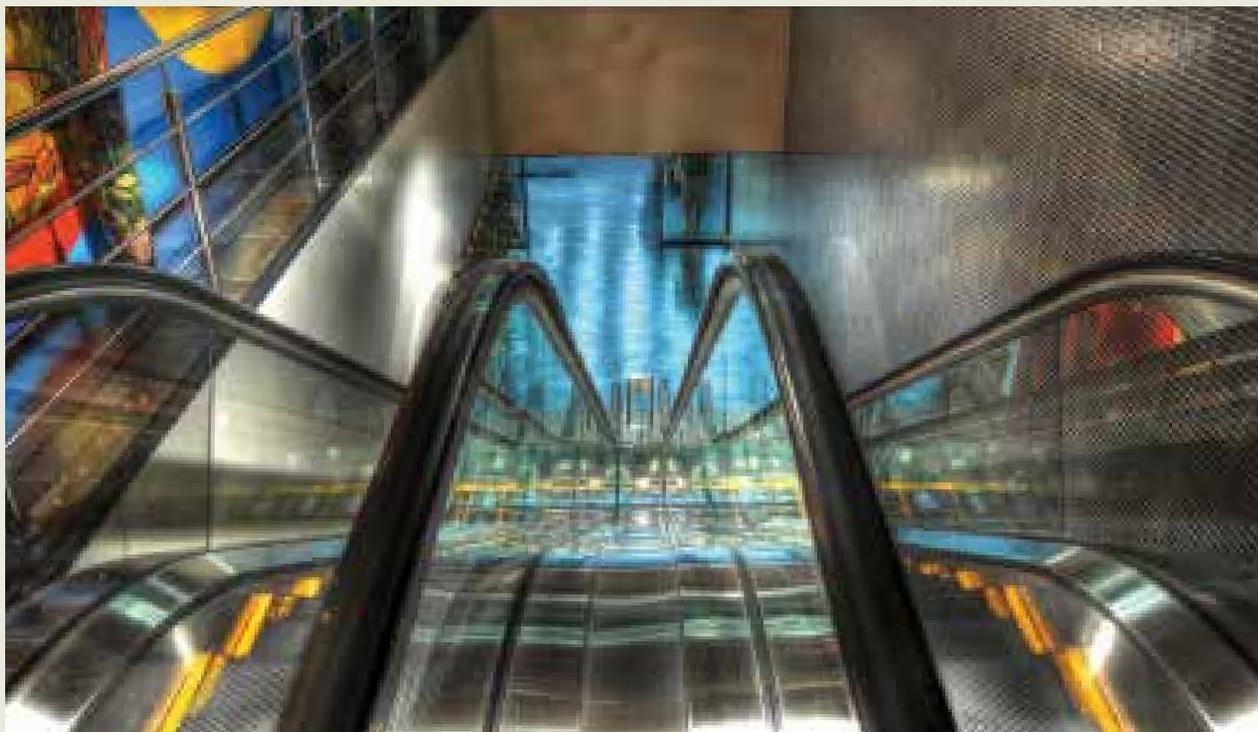


**POLARTEC®**  
NeoShell®

© 2014 Polartec LLC. All rights reserved. Polartec, NeoShell, and the Polartec logo are trademarks of Polartec LLC.



## Specialty Retail Feels New Competition Over the Horizon



Though still young, the companies Stio and Kuui seek to pull the double margin sword from the retail stone and sell product directly in response to their customers. This alone isn't so unusual; however, both these companies are headed by former B2B enthusiasts who have spent years polishing their new merchant models.

Kuui was started by Jason Hairston, who sums up the inspiration in starting this 'hard mountain hunting' brand on the company's website;

"From my experience at Sitka I knew this idea wasn't viable or realistic within the existing retail model... So I thought, why not bypass the retailer, why not take the middle-man out of the process and move everything one step closer to the customer. By selling online direct we could make the best products, keep the prices down and manage, to our standards, every aspect of the customer experience."

But the brand's secret is its total transparency and extensive blogging effort. Kuui has in effect crowd sourced its apparel design, and in the

process created a community of product champions;

"Eventually I started writing about researching and designing specific pieces in the line. (and) more and more I started directly asking people for their opinions about specific things... What did they want? Hoods, yes or no? PrimaLoft vs. down?"

"...I decided that I'm going to share everything with the KUIU customer. I'm going to tell them as much as I know about the products, as much as I know about the fabrics, and as much as I can share about who makes each product and where they come from... I want to invite the customer in and share what's happening, from the insider perspective."

No surprise, the product is often pre-sold. The company blogs the arrival dates of different styles and the internet faithful send in their orders;

Stio also looks to build a community, but they are creating a brick and mortar clubhouse instead of a virtual one. Stephen Sullivan,

co-founder of Cloudveil, is operating Stio from a modest store front in Jackson Hole where the company will deliver a web/catalog/specialty experience. He clearly sees their advantage;

"I honestly think we'll set ourselves apart by being ourselves. Living here in Jackson we are intimately a part of the fabric of the outdoor world, and try as many companies have, you just can't manufacture that. We're just some good folks making some good clothes for good people."

We used to call that, 'being for real', and I believe Gerry and Holubar had very much the same formula in the 1960's (minus the web presence). In this case I think Sullivan also sees the modern challenge:

"The biggest hurdle... is achieving brand exposure without the benefit of the wholesale channel, and importantly, getting the business to some measure of scale and cash flow in short order. The business will live or die based on our ability to produce great product

and show that we have a unique brand position in the marketplace."

For both companies the fuel for this distribution model comes from a healthy single gross margin. The irony is that the market price, being inflated by the double margin, B2B system, is what makes their direct product look so competitive. That fattened, normal-old-retail margin is what these companies fight against while preying upon, and sooner or later, these sell-direct Robin Hoods will have to become progressive, or efficient, or, dare I say it, make their product in the United States. But for now, they decimate the standard price structure in the marketplace.

The most vulnerable traditionalists are those big retailers; the REI's and Cabela's of the world, where the extra margin dollars buy the customer almost nothing. The enthusiasts, i.e. the people who know better, will leave the old guard big boxes in droves for internet companies like these that are nimble, attentive and authentic. The last time that happened, the core of a new industry was formed.

The brands like Stio and Kuui emerge with a distinct twist. Instead of being the price driven knock-offs that pundits predicted, the new specialty brands do the unexpected, they connect with their customers and create a community. The immediacy of this relationship can't be reproduced by a company with a rep force that shows buyers their me-too product again and again in order to satisfy a product cycle that takes forever by today's standards. Rather, it is being created with intent, by putting the mutual respect between customer and brand at the forefront of the company's product mission. The benefits of price and delivery follow far behind this basic human need.

CORDURA  
1985  
FABRIC

*The Apparel Collection*

A layered approach  
to comfort and durability



Protecting The Apparel Collection. Introducing new CORDURA®  
Blended™ fabrics. Now you're covered from head to toe.  
Get comfortable at [cordura.com/layer](http://cordura.com/layer)

© 2012 CORDURA CORPORATION. ALL RIGHTS RESERVED. CORDURA IS A REGISTERED TRADEMARK.



Green with Envy: Sustainable designer swimwear with Repreve recycled fibers.

### Turning Tobacco Plants Into Textile Products

ComWest Enterprise Corp. has made an initial equity investment of \$1 million in a Ploughboy Organics, based in Raleigh, NC, the owner of a patent pending technology developed by its founder and CEO, Suzanne DeVall, which can convert the tobacco plant into dyes, fibers, textiles and other products with minimal environmental impact. The Ploughboy technology provides an opportunity for the tobacco plant, which has never been used to produce fiber or dyes, to become a new global and renewable raw material resource.

Analysts, Inc., reports the global market for textile dyes alone is projected to reach \$5.5 billion by the year 2015, driven in part by innovative, eco-friendly dyes and chemicals, and resurgence in post-recession demands.

The unique properties of the tobacco plant along with its ability to be grown in a certified organic manner, allows the plant to be used in its entirety to produce fiber and dyes with minimal environmental impact and waste.

With the assistance of research at North Carolina State University, Ploughboy technology has achieved the proof of concept stage with respect to the production capability for organic dyes and fibers. Pre-commercial production of dye concentrate is expected to be in place by this summer allowing Ploughboy to produce sample dye orders to major retail brands and textile manufacturers.

### Swimwear That is Both Fashionable and Sustainable

Aqua Green Eco Swim swimwear is made with Repreve recycled fibers. "We wanted to provide our customers with a sustainable swimwear choice that would flatter their body and speak to their personal style. Repreve allowed us to achieve this with no sacrifice to fit, quality or design," says Sandra Davidoff, director of corporate public relations.

### RadiciGroup Stresses Green Development

RadiciGroup has developed r-Radyarn, a low environmental impact product made from 100 percent post-consumer recycled PET bottles. According to the company, r-Radyarn is a safe product, the result of a multi-stage process – from post-consumer bottle collection to reprocessing and yarn production – all taking place in Europe and monitored at every step.

"Sustainability concerns so many of our target sectors, from technical sportswear to intimatewear and automotive, to mention just a few," says Roberto Parenzan, RadiciGroup Polyester Area R&D manager.

The r-Radyarn range is available in a variety of counts, colors and luster, and in three different versions: textured, interlaced and taslan (POY and drawn versions of this eco-compatible yarn are sold under the r-Starlight brand name). Further, r-Radyarn comes in several cross-sections: standard (round and trilobal) and special (multi-lobal, channel and hollow trilobal). For higher environmental sustainability, these yarns are also available in solution-dyed versions. ●

## A Business Case for Sustainability:

# Value Creation beyond Internal Eco-Efficiency

By Samuel B. Moore



We are all familiar with value creation from investments that produce efficiencies within internal operations. For instance, lower energy consumption, more efficient transport and condensed packaging. Many investments in sustainability that readily reduce resource footprints, increase human productivity and utilize greener materials produce immediate economic present value returns for investors.

Success of these investments and connection of "sustainability" to value creation and lower costs, are a very big deal. Companies should celebrate eco-efficiency as a major first step in recognizing the value of sustainability as part of any company's strategy, but not just internally, if the goal is to maximize returns on investment.

It is important that internal present value investments towards sustainability are recognized as providing companies a foundation of value and leadership that:

1. Develops communities around the values created and utilize these capabilities to form multiple ties to stakeholders that move beyond price and technical characteristics of the goods and services. (Social networking)
2. Accelerates the technical and learning capabilities developed from internal sustainable value creation to develop future technical and material innovations specific to the conditions of a "hot, flat and crowded" world. (Escape the incremental)
3. Embraces and celebrates the different current and future needs of emerging markets by using capabilities learned from internal improvements. (New customers, new products, new values)

Reaching out to stakeholders by teaching and celebrating achievements towards more sustainable goods and services produces dialogue and valuable feedback and learning loops from these new stakeholders, which may be very valuable in transforming them into new customers or investors. Such insights become the core catalysts for brand, product and company differentiation.

Key steps for intentional outreach on sustainability to externalize the value of investments in sustainability are:

1. Disclose successes and even failures in investments towards sustainability (Sustainability Reporting).
2. Listen, engage and learn.
3. Incorporate learning into strategy and activities.

Here's a good example: Recently, a consumer products company announced the completion of a two-year program to reduce solid packaging waste and energy consumption at its production facility. A detailed disclosure of the achievements in packaging redesign was published. A student organization learned of these efforts and linked the results within student groups nationwide. Highly active discussions of these accomplishments occurred online. A design class at a university, using this sustainability report as a foundation, studied the project and uncovered an additional improvement that saved the firm another 50 percent reduction in materials. This collaboration was acknowledged publicly and now there is a formal link between the R&D team at this company and the student designers at this university.

Celebrate internal investments in sustainability, but do not forget the value of transparency and disclosure in obtaining and engaging new stakeholders to increase external present value of investments in sustainability. ●

Samuel B. Moore, PhD, is an adjunct associate professor at North Carolina State University College of Textiles in Raleigh, NC.



Visit Lenzing  
booth # 255-3 at  
Outdoor Retailer,  
August 2-5, 2012

## Concentration on Green

Golf is a sport for people with discerning tastes. TENCEL®, the natural cellulose fiber, creates high quality golf apparel which is both soft on the skin and functional thanks to perfect moisture management. Flawless body temperature equalization helps keep a cool head during the golf tournament. With TENCEL®, golfers can concentrate on their games and make that hole-in-one!

Find out more at: [www.lenzing.com/tencel-active](http://www.lenzing.com/tencel-active)

# China: Asian Textile Sourcing Hub

China's textile and apparel industry in 2011 displayed two operational characteristics:

- According to statistics, from January to August 2011, China's key, large domestic department stores achieved a 23 percent year-on-year growth in apparel retail sales, with price up 16 percent while volume merely up six percent; apparel export value rose 23 percent year-on-year, with price up 43 percent but volume down 13 percent. The domestic market is certainly a factor to watch in the future as demand grows. Self-owned brands are growing as China emerges into global markets. The brand names need work, however. Ningbo Yinzhou Kellywell Imp and Exp Co Ltd are not exactly easy to remember as a manufacturer of women's plastic rain boots. And brand names such as "Baby Tird," "Teets," "SQONY," and "Weenie" cannot be pronounced or will not exactly go down well outside of China.

- Apparel and home textile enterprises performed better than textile manufacturing ones. The focus may be one of vertical integration going forward.

China's textile industry has been tested severely in the fluctuating global economy during the 11th five-year plan period from 2006 to 2010. International market demand fluctuated causing trade protectionism due to global unstable macro-economic conditions. The Chinese industry weathered all the storms and continues to do so. In this period the number of above-scale companies engaged in the Chinese textile industry in 2006 reached 39,400 and surged to 54,100 to the period of September, 2010.

The number of overall employees in the Chinese textile industry in 2006 was 10,302,500, and increased to 10,879,000 in the period to August, 2010

In 2006, the Chinese domestic market accounted for 73.1 percent of overall industrial output and

increased to 81.14 percent in the period to September, 2010.

## The Chinese textile industry showed resiliency and sustained growth despite negative external impact.

During the first nine months of 2010, investment reached 99.795 billion RMB, rising by 42.61 percent year-on-year and western region investment reached 27.493 billion RMB, rising by 56.12 percent year-on-year. Investment growth of the middle and western region

which grew by 8.04 percent points since 2006.

Major trends in the EU and U.S. textile trade from China since 2006 stayed virtually unchanged. Quotas that were re-imposed on China's products also had no radical effect on global textile and clothing trade, according to the World Trade Organization (WTO). While releasing a first look at last year's main trends in global trade, the Geneva's body said that "structural changes in world

apparel imports from the country while EU imports were even up 34 percent from the same origin. European imports from Vietnam surged 51 percent in U.S. dollar terms. Cambodia and Indonesia also took advantage of a strong rise in shipments to both EU and U.S. markets.

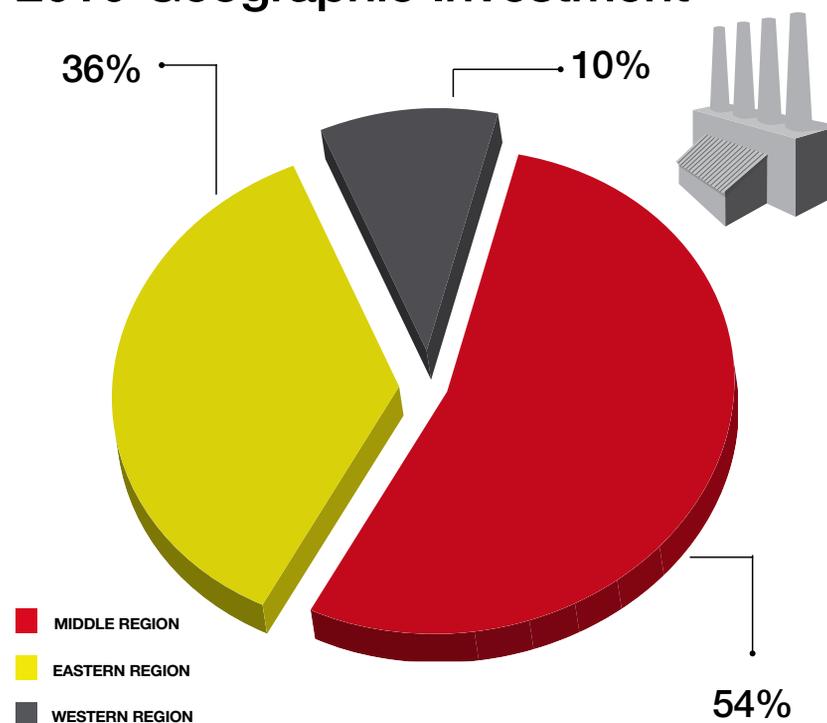
## So what are the major trends in globalization?

- Developed countries in Europe, North America and Asia show an increasing drop in local production due to competition from low-cost producers. Hong Kong, Taiwan and Korea are affected by rising costs.
- Processing trade with Mexico-Central America (U.S.) and North Africa-Turkey (EU) adds pressure to the remaining textile production in EU and U.S.
- China sustains textile and clothing exports growth, despite a range of regulatory measures imposed by EU and U.S.
- Developing countries in Asia continue growth, due to low-cost production. Bangladesh, Cambodia and Vietnam are growing sustainably.

One cannot help to question the sustainability of growth of the textile industry in China as the global economies continue to be extremely volatile, and the only driver remaining is consumer demand. Could consumers in time re-think consumption? Could the concern for the impact of disposable fashion on the environment or maybe taxation on wastage and disposal impact on demand? Could cost of fuel and transport across oceans in time be an external factor to consider and impact on globalization and sourcing strategies? ●

*Lizette Smook is the founder of InnovAsians, a development and manufacturing company, based in Hong Kong that focuses on supply chain transparency for eco-friendly, sustainable lifestyle products. For more information, visit [www.Innovasians.com](http://www.Innovasians.com).*

## 2010 Geographic Investment\*



respectively outweighed eastern region investment (12.63 percent) for 29.98 percent points and 48.98 percent points. Could one assume that due to the geographical investment "shift" with resulting lower operating cost, the sustainability of "growth" actually increased?

Increasing domestic demand can be an additional factor towards sustainable growth. The sales revenue of textile companies in the domestic market accounted for 81.14 percent of total sales

trade of textiles and clothing continued unabatedly."

China's exports were not affected by U.S. and EU limits that were set in 2005. China's shipments of textiles and clothing even rose 25 percent in U.S. dollar terms in 2006, compared with a 21 percent increase in the prior year. This is mainly due to a strong development of sales to other destinations than the United States and the European Union.

Bangladesh benefited from a 22 percent jump in U.S. textile and

### Leading Swiss Firms Join Forces



Schoeller Textil AG from Sevelen and the Eschler Group from Bühler, leaders in the stretch woven and knits segments are joining forces. The cooperation of the two traditional Swiss companies, under the management of Schoeller Textil AG, broadens the product range with Schoeller textiles and technologies complemented by high quality and highly functional Eschler knitted fabrics.

Eschler and Schoeller have been cooperating in production for many years. Peter Eschler says of this partnership, "Another common feature of Eschler and Schoeller is that both these traditional companies are in family ownership and foster comparable values and cultures."

In November 2011, Eschler announced that an innovation center was to be built in Bühler in the course of restructuring measures. This plan will now be implemented in Schoeller's research and development department in Sevelen and in the Schoeller laboratory for chemical analysis and microbiological studies in Gams.

Schoeller Textil AG is taking over Eschler Textil GmbH in Balingen, Germany and the sales organization for commercial and professional sportswear which will remain in Bühler employing 45 people. The former managing director, Matthias Eschler, will remain in charge of the plant in Germany and will further expand the Technical Textiles segment. In addition to these Technical Textiles, the production plant in Balingen will also manufacture the high-tech knit fabrics for commercial and professional sportswear for Schoeller.

Within the new association

with Schoeller, the Eschler brand will retain its independence.

### PrimaLoft Completes Purchase

PrimaLoft has completed the acquisition of the assets of PrimaLoft from Albany International Corp. The purchase of PrimaLoft was led by Michael Joyce, former president of Albany International Corp.'s Applied Technology Group, and the PrimaLoft senior management team. The purchase of the PrimaLoft business was supported by Prudential Capital Group. The entire global PrimaLoft team will remain in place and offices will remain headquartered in Albany, New York; with European office locations in Ballo, Italy, and Munich, Germany.

### Coors Joins Outlast Technologies as CEO

Outlast appoints Michael Coors as Chief Executive Officer, following its acquisition by Golden Equity Investments (GEI) earlier this year. Prior to joining Outlast, Coors worked as a manager at 9th Street Investments, a venture capital fund focused on advanced materials, as well as in management roles of two start-ups: one in the advanced materials space and one in the ski industry. Greg Roda will continue to manage day-to-day operations, supply chain and business partnerships as Chief Operating Officer.

With Coors as CEO, Outlast will continue to focus on expanding its current portfolio of products and value-add to partners, while forging new relationships to bring to market more products with Outlast technology.

In March, Outlast was acquired by Golden Equity Investments (GEI), a private equity firm based in Golden, Colorado.

### Lenzing Plans New Tencel Factory

Lenzing is to invest around EUR 130 million in a new production plant for its Tencel fiber at its headquarters in Austria. The new factory will have the capacity to produce 67,000 tons of Tencel per year and will create 110 new jobs. ●

**CLIMASHIELD®**  
INSULATION INNOVATION

# WARMTH THAT DOESN'T WEAR OUT

**Stretch it. Pack it. Wash it.**

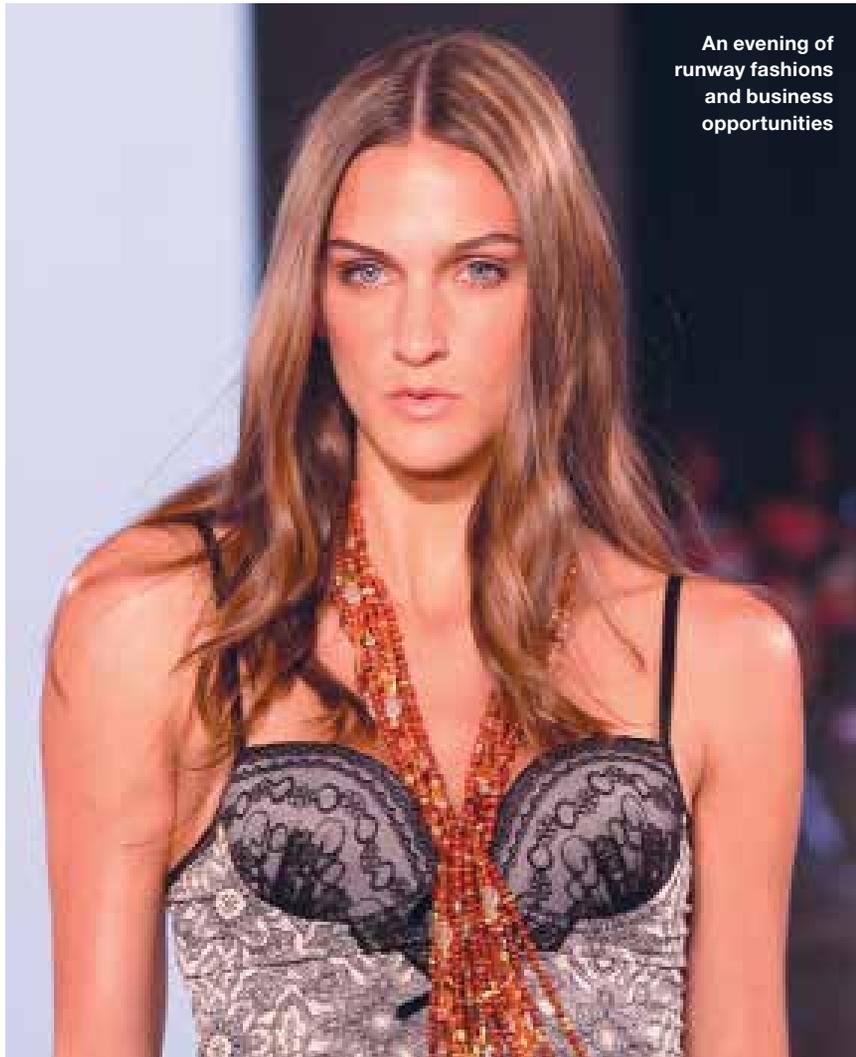
Continuous filament insulation ensures consistent warmth throughout the life of the product.



## IN THE MARKET | COLOMBIA

### Cause for Celebration and Promotion of the Advantages of the Colombian Textile Industry

## Free Trade, Fashion and Fabric



**T**he Free Trade Agreement that took effect May 15 looks to give a new boost to Colombia's textile and apparel business and it gave way to a New York City-style celebration. "Colombia Knows Best" was the theme of a series of promotional events staged in Manhattan last month capped off with evening extravaganza of fashion and fanfare.

Colombia's clothing and textile industry is one of the largest and most experienced in Latin America, with more than 1000 companies exporting to 139 countries last year. Corporate uniforms, household linens, swimwear, lingerie, intimates and accessories are a few of the items that will have "zero" tariff upon entry to the U.S. given the recent FTA.

ProExport Colombia, a sponsor

of the Colombia Knows Best week-long promotion positioned the country as a top textile contender. The textile industry accounts for more than five percent of total Colombian exports, becoming the most important sector of non-traditional products exported from Colombia. Last year, the textile market grew seven percent and the apparel industry grew by nine percent.

The event on June 27 showcased Colombia's expertise in fashion, specifically manufacturing, and highlighted the country as a major player in the global supply chain. Indeed, Colombia has become a go-to sourcing destination for international textile and apparel companies including Levi's, Victoria's Secret and Adidas, among others.

The most important products



in the last five years have been jeans for men and boys, cotton trousers for women and girls, and bras. These three products represented 27 percent of the total exports in 2011.

Between 2007 and 2011, sales of Colombia to the U.S. in the sectors of textiles, apparel, footwear, leather, leather goods and jewelry exceeded \$300 million.

At the Waldorf event, about 1000 guests were treated to a personal greeting from the First Lady of Colombia, Maria Clemencia Rodriguez de Santos, followed video broadcast of President Juan Manuel de Santos, who underscored the potential for investment in his country. He stressed his country's skills in flexible production, fast delivery and it's vertically integrated industry.

### COLOMBIAN FACTS

\$1.408 MILLION: 2012 EXPORTS  
MAKING FABRICS FOR FASHION: 100 YEAR HISTORY



### FLIGHT FACTS

NEW YORK TO BOGOTA: 5.5 HOURS  
NEW YORK TO SHANGHAI: 14 HOURS



An elaborate fashion show spotlighted sophisticated styles and colorful products. Categories highlighted included corporate uniforms, lingerie, beach wear, sportswear and activewear and accessories.

If the fashions were not exciting enough, the runway also staged an impressive performance by aerial acrobats followed by confetti falling from the ceiling of the Grand Ballroom.

The fun event was organized by the Embassy of Colombia in the United States of America, the Ministry of Trades, Industry and Tourism, and PROEXPORT Colombia.

Other events held during the last week of June included a business matchmaking forum where 350 Colombian exporters and 250 U.S. buyers attended an exhibit of supply opportunities. ●

# WITH SUSTAINABILITY, IT'S THE LITTLE THINGS THAT COUNT.

Micro-Pak® products not only keep your goods clean and fresh during transportation, they are also designed for environmental performance. Because our products and their environmental impacts are so small, the sustainability benefits stack up high against our competitors. Using Micro-Pak's lightweight stickers and sheets is one of the little ways to make big strides toward achieving your company's sustainability goals.



## Our sustainability mission

Micro-Pak's sustainability mission is "to proactively and systematically eliminate any negative environmental impacts in our business." And while we're at it, we want to inspire customers to do the same. Here is a sample of the ways we're doing major, impactful and visible things to meet these sustainability goals:

☑ **Lightweight packaging** – Micro-Pak products weigh as little as 0.37 grams each, while other packaging options can be five or ten times heavier.

↳ Learning from nature allows gel products to minimize traditional packaging volume.

☑ **Recyclable materials** – All Micro-Pak products are made from recyclable low-density polyethylene (LDPE).

☑ **Safe for the environment** – All Micro-Pak products comply with strict environmental legislation, including REACH and California Proposition 65, as well as the restricted substance policies of leading brands and retailers.

☑ **Lower CO<sub>2</sub> emissions** – Our lightweight products result in less fuel used and less CO<sub>2</sub> emissions during transportation. Although the individual difference is small, applying it to millions of tons of material shipments makes a big impact. The Emissions Calculator compares the carbon usage and CO<sub>2</sub> emissions of Micro-Pak products to those of our competitors. Contact us to model the impacts based on your unique shipping profile. It's another little way to realize big environmental benefits.

From our 100% renewable sustainability strategy to our dedicated personnel to do the work, the Micro-Pak team holds a significant commitment to sustainability. With each year's success, Micro-Pak is committed to continually improving its range of products, our company – and by extension, our customers – better environmental outcomes.

**MICRO-PAK®**

[www.micropak.com](http://www.micropak.com)

[www.MicroPakLT.com](http://www.MicroPakLT.com)

[info@micropak.com](mailto:info@micropak.com)

800-747-6766

Indie Shops with Homegrown Style and Spirit By Emily Walzer

# Make Local, Sell Local

## Freemans Sporting Club

Bespoke suiting is a specialty here, with a master tailor on-site to custom design per customer. While fabrics are sourced globally, all clothing at Freeman's is made within a 10 mile radius and hang tags denote the distance from the manufacturing. A popular seller is the Winchester Trousers, a cotton/flax blend stitched just minutes away uptown.



**Jesse Johnson**  
Manager, Bleeker  
Street location



## The City Quilter

A mecca for quilters around the globe, this urban haven offers an enormous range of cotton fabrics but also sells the Swiss Bernina sewing machines and offers an assortment of classes — not to mention a gem of an art quilt gallery. In business for 15 years, the owners now produce a line of fabrics with proprietary NYC designs.



**Cathy Izzo**  
Top left, shop owner,  
The City Quilter





**James Caviello New York**  
 James Caviello, known for his prints and dresses, wants people to “step into our world for a total lifestyle experience.” A veteran designer – for Anthropologie and others – Caviello now has a cozy shop on the Lower East Side. Garments take shape in a busy back studio while customers browse just steps away for Caviello brand clothes, hats and jewelry.



**James Caviello**  
 Designer and retail store owner

**-STAY WARM-**  
 With the Warmest Thermal Properties!

**-STAY DRY-**  
 With the Best Waterproof, Wicking, and Breathable Material!

**-STAY ACTIVE-**  
 With the Lightest, Stretchable Tech Apparel Fabric in the Industry!

WARMER THAN  
 POLYESTER AND NYLON

98.6° F	— Polypro (6)
90° F	— Polyester (7.3)
80° F	— Nylon (10)
70° F	— Cotton (17.5)

...all you feel is the comfort,  
 all you hear is the wind....

©2012 Vapour Flex  
 Vapour Flex • 4090 Industrial Park Blvd • Pikesville, MD 21112  
 1.800.922.9253 • www.vapourflex.com

A Round-up of the Latest Developments in Manufacturing and Marketing

## Mount Vernon Mills Expands U.S. Capacity for FR Fabrics

**M**ount Vernon Mills has more than doubled its capacity to produce flame resistant (FR) fabrics in its manufacturing facilities located in Trion, GA.

“The increase in capacity is a demonstration of our commitment to producing FR fabrics in the U.S. in our vertically integrated manufacturing facility, where we have in-house control of 25 major processes, including spinning, weaving, dyeing and FR finishing,” says Mike Woods, VP-flame resistant fabric sales for Mount Vernon Mills. “We now have three ranges producing FR fabrics, and we are the only U.S. producer to be using the latest technol-



ogy in softening equipment from Biancalani.”

The company has invested more than \$15 million in capital

equipment to support its FR programs. The increased capacity will allow Mount Vernon Mills to continue to provide consistent six to eight week delivery of its flame resistant fabrics while also maintaining in-stock inventory on core products and colors that will be available for immediate shipment.

The expansion will enhance the company’s ability to meet increased demand for flame resistant garments to protect workers against hazards associated with electrical energy (NFPA 70E) and oil refining (NFPA 2112).

Mount Vernon Mills uses more than 3000 computer monitored control points and extensive quality assurance testing to provide the highest level of performance

and durability in FR fabric.

“Our heritage began with sail cloth and canvas for tents, and has evolved into being a leading producer of fabrics for career apparel and the military,” adds Woods.

All FR fabrics are backed by the company’s Eco-Excellence program, providing flame resistant fabrics that are made responsibly. Flame resistant fabrics from Mount Vernon Mills comply with the following standards for environmental excellence: Oeko-Tex, SONG Sustainability Initiative, REACH; Worldwide Responsible Apparel Production (WRAP) Principles, Responsible Care (CMA) and the Environmental Stewardship Program. ●

## Personnel

**IFAI:** The Industrial Fabrics Association International (IFAI) named Mary Hennessy president and CEO. An IFAI employee for 24 years, Hennessy most recently held the position of interim executive vice president. Prior to that, she worked as vice president of communications and publisher of IFAI’s six industry magazines.

**CONCEPT III:** The UK office of Concept III has added Mark Palmer to the sales team. He joins Chris Humphris and Gwen Moore at the company’s UK main office in Skipton, North Yorkshire. Palmer has spent the last 17 years in sales, product development and marketing for key international active sports and outdoor apparel and accessory brands. Most recently he was with outdoor product maker, Lifemarque Ltd. where he managed sales and collaborated on product development and merchandising. At Concept III Palmer will help major brands in the UK and Europe develop performance textiles for their outdoor apparel products.

### PRODUCT NEWS

**Bemis:** Three new and improved product lines will debut this summer. The Bemis Proteus series of decorative overlay tapes are easy to apply and can dramatically enhance the look of garments. There are five new textures for designers to consider. These materials are pre-applied with a unique adhesive film and custom slit to your requirements.

Bemis Compression Films can achieve body shaping and increase dynamic compression when strategically placed throughout the fabric. Both strong and lightweight, they feature excellent wash resistance.

Also new is VividEdge in two film choices for improved fabric compatibility. In this application a colored Sewfree adhesive film is used to create a bonded seam. The result is one

product that combines seam construction and design aesthetics

**Wickers Performance Wear:** The Commack, NY company has earned the USDA Certified Biobased Product label for its Wickers FR T-shirts. The USDA Certified Biobased Product label verifies that the Wickers FR T-shirts contain 97 percent of renewable biobased ingredients which meets or exceeds USDA standards. Biobased products are goods composed in whole or in significant part of agricultural, forestry.

Ron Buckhalt, USDA BioPreferred Program Manager. “Biobased products provide opportunities to help add value to renewable commodities; create jobs in rural communities and generate investment income.”

**Polartec:** The company has been selected as a winner of the 50th Annual R&D 100 Awards. The Awards recognize the 100 most technologically significant products introduced into the marketplace over the past year. The company won for its Neoshell breathable waterproof fabric.

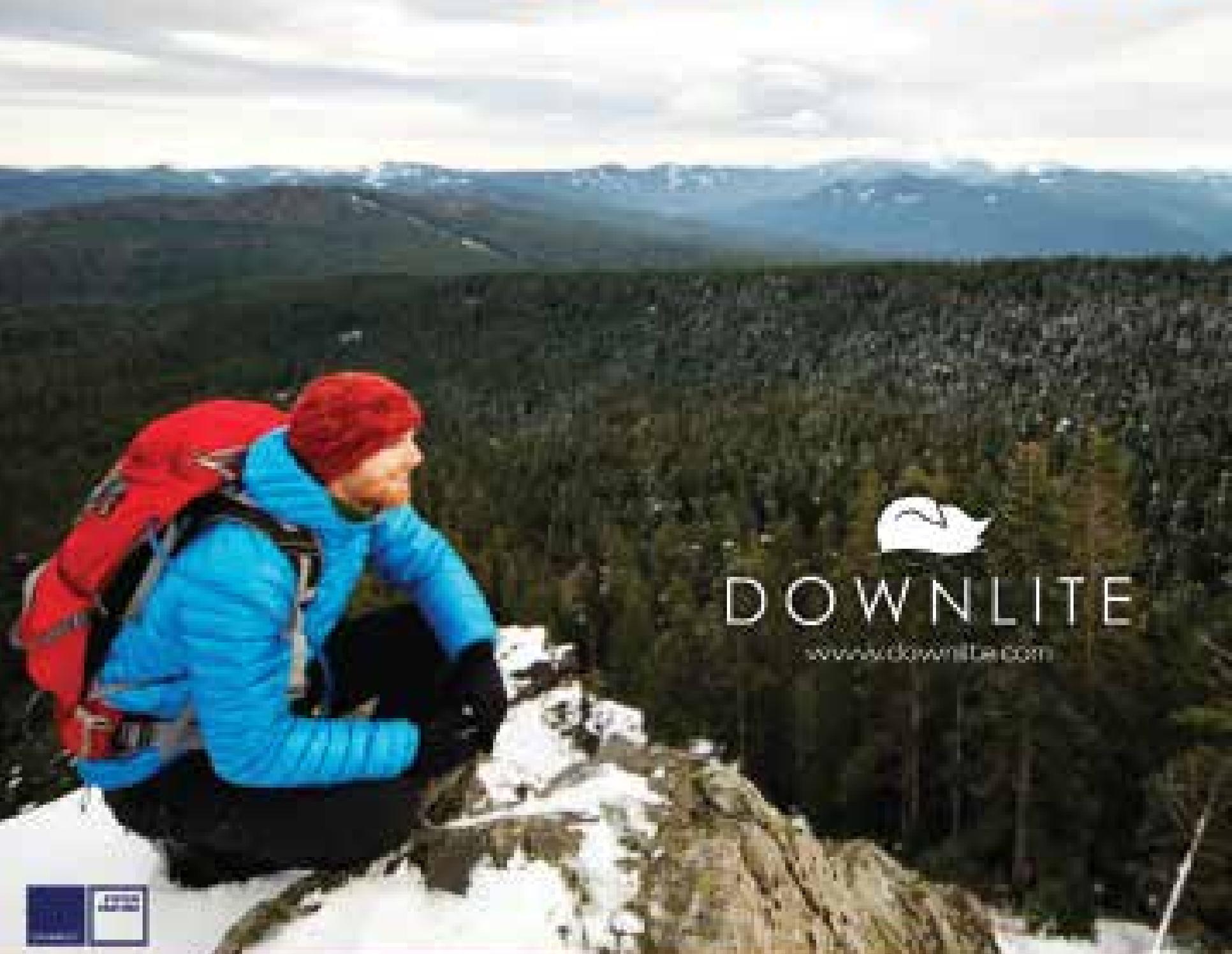
The R&D 100 Awards are a benchmark of excellence for diverse industry sectors such as telecommunications, high-energy physics, software, manufacturing, and biotechnology.

“The development of Polartec NeoShell represented our largest investment in research and development ever when we brought it to market,” says Allon Cohne, Polartec global director of marketing. “We’ve always believed that Polartec NeoShell will help change the way people think about

waterproof fabric, and we’re honored by this recognition.”

**Celliant:** In an effort to build brand awareness within the running community, Celliant is a sponsor of The Wipro San Francisco Marathon. Runners will receive an official race long sleeved technical shirt powered by Celliant technology designed to optimize performance and recovery. Drawing over 25,000 participants each year, the race is commonly referred to as the “tech marathon,” offering offers cutting edge technology resources to participants, including runner and spectator mapping and tracking, as well as virtual couponing and high tech apparel, making it the perfect venue to showcase Celliant’s benefit’s according to the company. ●

# MOTHER NATURE INVENTED DOWN. WE MADE IT **BETTER**



DOWNLITE

[www.downlite.com](http://www.downlite.com)



VISIT US AT BOOTH # 38072 AUGUST 2 - 5 OR SUMMER MARKET



The minimalist trend inspires new, nimble footwear components **By Marcus Woolf**

# BARE INGREDIENTS

Less is more. That simple statement best describes a major trend in footwear, as barefoot running and minimalist shoes are no longer oddities, but real trendsetters. To build Spartan shoes that are highly functional, footwear makers have turned to suppliers for fresh ingredients, like waterproof membranes that are more flexible, and lighter, more resilient foams. Even beyond the minimalist market, a wide array of new footwear components are shaving weight, while making products more comfortable and durable. Several suppliers shared with us their latest innovations featured in outdoor footwear, as well as their thoughts on trends shaping future designs.



Skora: Lightweight goatskin by Pittards.



**Matt Schreiner**  
W.L. Gore

**Matt Schreiner, Category Leader for outdoor footwear, W.L. Gore**  
**Textile Insight: With the minimalist trend dominating footwear right now, how is it impacting technology development at W.L. Gore?**

We're working aggressively with our outdoor partners on construction enhancements. Now that the minimalist trend in running is well under way, we're learning to incorporate a Gore-Tex lining inside of a shoe that has to be much more flexible, much more conformable on the upper, and unperceivable. You'll see new construction on products from athletic companies that are making a push into the outdoor market, like New Balance, Saucony, Brooks and adidas.

We're making engineering upgrades and modifications to some of our traditional constructions. For example, we're looking at different ways of incorporating the tongue into the shoe that minimizes or eliminates the traditional gusset folds you see in more heavily structured uppers.

The minimalist trend plays well to our product attribute of being very lightweight. People are beginning to associate Gore-Tex with lightweight products like the Inov-8 RocLite (a Gore-Tex, mid-cut boot weighing just 10.2 ounces). People are realizing that adding an ounce or less to a shoe and getting all that performance is a pretty significant advantage.

**Will the minimalist trend cause W.L.**

**Gore to look beyond construction, and maybe develop new materials?**

As we look at what minimalist users really need, it's an opportunity to design more than just construction innovations, but things that go to the laminate level. When the really rapid adoption level of minimalist footwear ends, the whole design philosophy and material selection for footwear will be affected.

**Doug Burley, VP, P2i**  
**Describe your Ion-mask technology and its performance benefits for footwear.**

Ion-mask technology by P2i is a liquid repellent nano-coating one thousand times thinner than a human hair. The technology works to lower the surface energy of products such as footwear, hats and gloves to make them 'neutral' to liquids. When water hits the surface, instead of being attracted and absorbing into the material, the liquids stay attracted to themselves, forming droplets and rolling off the surface. This technology ensures the shoe remains lightweight, dry and clean without affecting its natural breathability.

**What sparked you to develop the Ion-mask technology?**

P2i's technology was originally developed to improve soldiers' protective clothing against chemical attack. P2i's technology was created to modify fabrics to repel liquids without affecting the original benefits.

**Talk about trends in the footwear market that are driving your product design.**

The trend in performance footwear at the moment is not necessarily keeping your feet completely dry, but instead with a focus on keeping the footwear lightweight. As a liquid repellent nano-coating, Ion-mask reduces the amount of water uptake in a shoe and ensures there is very little water absorption. This means for long-distance events, the shoes will start the race at 9.5 ounces and end around 9.5 ounces. By focusing on reducing the absorption of water, Ion-mask can be applied to uppers maintaining excellent breathability.

**Mike Henshaw, Director of Operations, Outlast Technologies**

**You mentioned that manufacturers use Outlast in shoes and boots, as well as insoles. What are the main ways that Outlast affects the performance of these products?**

It's designed to improve comfort in all types of environments and provide longwearing abrasion resistance, anti-odor properties and heat and moisture management. The most important aspect of our technology is that it proactively manages heat to help mitigate perspiration before it begins, unlike reactive technologies such as wicking, which only begins to work after the user has already overheated and started to sweat.



**Mike Henshaw**  
Outlast  
Technologies

Work hard...  
Play hard...  
Feel *"just right."*



86°F

68°F

[outlast.com](http://outlast.com)

## Manage Heat. Manage Moisture.

Apparel and footwear made with Outlast® materials manage heat to control perspiration before it begins. Give your customers the ultimate in heat and moisture management so they can stay cooler, drier and more comfortable.

Visit us at [OutlastRetailer.com](http://OutlastRetailer.com) 1-800-424-429, to learn more about the Outlast® difference.





1. Plus Foam: Provides better rebound than EVA. 2. P2i: Shoes remain neutral to liquids.



Mike Dodd  
Pittards

Outlast technology in footwear delays the onset of sweat, and reduces it by up to 44 percent to keep users more comfortable for a longer period of time.

**What are some new ways that Outlast is being deployed in footwear?**

A recent innovation includes our pairing of spacer fabrics (double needle-bar knits) with Outlast technology to replace traditional foam padding in hiking boots and shoes. It can be engineered for optimal compression and return, and it doesn't lose its ability to rebound, as foam tends to do.

**What are some new Outlast technologies you're working on?**

There is a real opportunity to expand the application of Outlast technology into other footwear segments beyond traditional performance wear that people typically associate with our technology. We already work with different partners like Timberland on a professional line for nurses (Timberland PRO Renova), but because our technology is so versatile, other segments such as fashion footwear can also realize the heat and moisture management benefits Outlast technology has to offer.

**Mike Dodd  
Marketing Director, Pittards**

**What is happening with demand for leather in the footwear market, and what types of leathers are footwear manufacturers looking for?**

As we look two years out at general trends, we still see the same movement toward more natural materials. Increasingly, our customers are driving for softer, lighter, more comfortable leathers. To this end, our outdoor and performance customers are adopting

more luxurious leathers, and they're also seeking less finished leathers offering more breathability. Plus, there's more demand for lightweight goatskin, and leather linings are a significant part of our offering.

**What types of Pittards leather will see emerging in the footwear market?**

Our highly abrasion resistant Keratan goatskin leather is already being sampled into some performance footwear programs for reinforcement in key areas. Otherwise, we'll feature more natural, classic-look leathers like Richmond, Aztec and the re-born Krypton.

**What are some of the general trends you're seeing in the footwear market, and how are they affecting your production?**

The footwear market is dealing with the increasing cost of manufacturing in China. There is a two-fold response. First, companies are exploring new manufacturing destinations—factories in other parts of Asia and now Africa. Second, they are justifying the value of the footwear that stays in China by moving it up-market with components and quality.

**Jimmy Barnhardt  
Director of New Business, Cocona  
With Cocona being used in a wider array of products, what are some of the new technologies you've developed for footwear?**

We are offering lining materials that include Cocona technology in the fiber to accelerate evaporation and quickly remove moisture that the foot produces during activity. We're also offering waterproof/breathable packages that include Cocona linings and our breath-

able waterproof film that has Cocona active particles printed on the film. These linings and films work together to increase breathability and accelerate performance. By keeping your feet as dry as possible, you stay warmer in winter and the evaporation increases cooling in summer.

**What sparked you to develop the footwear liners and waterproof/breathable packages?**

We had introduced lining materials to Scarpa and other brands. We did a lot of consumer testing (600 randomly chosen testers from a Backpacker magazine ad) that suggested that our materials perform optimally as a breathable, waterproof system. We built several different products that were tested by Hohenstein, Satra and SGS (independent product testing labs), and the results were very positive.

**Can you offer hints about materials we'll see from Cocona in the near future?**

We are looking at several foam, non-woven footbed and insulation products that are being tested this winter.

**Can you talk about a general trend in the footwear market that's affecting your product design?**

Materials are independently developed and not optimized for packages. We believe that solutions do not have to be several technologies put together, and that systems are the future. If you do use several technologies, they have to work in concert to deliver the desired benefit. Most importantly, the sock should also incorporate technology to turbo charge the system—just like your baselayer is so important for your outdoor layering system.



MONDAY-THURSDAY DECEMBER 3-6, 2012 / AUSTIN CONVENTION CENTER & HILTON AUSTIN

# THE RUNNING EVENT

## THE PREMIER CONFERENCE & EXPO FOR RUNNING SPECIALTY RETAILERS



SEE IT FIRST IN AUSTIN!



Executive John of Steve's Team will speak and judge product Innovation Competition



10 Best Running Shows to Attend Awards



Running Specialty Hall of Fame Induction 2012



Meet the Experts for the coveted title of fastest retailer in America



TRAIL RUN: Learn the great trail advice for 11 run through 100mi year

ASICS

asics

half-go

competitor

new balance

NIKE

sonicrun

THE ONLY RUNNING EVENT FINANCED BY THE **USA**

FORMULA4

www.theaustinningevent.com

See It. Feel It. Develop It. Run With It.

EXPOSURE MANAGEMENT  
262.477.0400 / CM.12121212

Jeff Noy, jnoy@forrestmedia.com 516-303-4711

## GORE-TEX® PRODUCT TECHNOLOGY INSIDE

adidas Terrex Fast R Mid GTX®  
GORE-TEX® Extended Comfort Footwear



GUARANTEED TO KEEP YOU DRY

**GORE-TEX**

WATERPROOF BREATHABLE

**WATERPROOF, BREATHABLE  
COMFORT & PROTECTION  
OUTSIDE**

© 2012 W. L. Gore & Associates, Inc. GORE-TEX, GTX, GUARANTEED TO KEEP YOU DRY, GORE and designs are trademarks of W. L. Gore & Associates



## IN THE STUDIO | FOOTWEAR

**Oofos:**  
Extremely durable functional foam.



**Michael Carr**  
Plus Foam



**Paul Brown**  
Oofos

**Michael Carr**  
Associate GM, Plus Foam  
Describe Plus Foam and how it's used in footwear.

Plus Foam is a compound that can be made into foam for sandals, shoes and other things like yoga mats. We can apply high heat and pressure and increase density to make a rubber-like component for outsoles. We can also injection mold it to make sandal straps. The material came about to potentially replace EVA foam and other foams like polyurethane. We have better rebound than EVA and generally compress less over time. Also, Plus is a closed-cell compound, so it's inherently non-microbial, so bacteria can't grow and fester, and sandal soles won't absorb water. Also, the Plus compound gets stickier as it gets wet, and it's a non-marking material.

**Who are some of the outdoor manufacturers you're working with?**

We're in the market with sandals from New Balance, Patagonia and a handful of other smaller brands. We're working with sandal brand Sazzi to make injection-molded outsoles, which create less waste than compression molded outsoles.

**You mentioned that your company focuses on being environmentally friendly. What are some of the things you do?**

A lot of brands seek us out for the environmental aspect of our business. Everything we make it 100-percent recyclable (whereas EVA is about 36 percent recyclable), so on the manufacturing side we yield practically zero waste, and manufacturers that use Plus Foam can feel proud about saying their products were made with a smaller carbon footprint.

We also offer a post-consumer reclaim service. If you were to buy a New Balance sandal made with Plus Foam,

you can go to the Plus Foam website, fill out a form and then recycle the product with us. Some brands are encouraging consumers to do this for a discount on a future purchase

**Paul Brown**  
Business Partner, Oofos

**Oofos foam is relatively new to the market. Can you explain how the material is used in footwear?**

The Oofoam compound is a new closed-cell foam compound that is proprietary. We have worked for two years developing it with a team of experts in foams and footwear. The patented Oofos footbed absorbs 37 percent more of your body's impact than other traditional foams, while still offering support. It's an extremely durable product that can maintain its design for an extended period of time. The unique foam conforms to your foot and supports all arch types, is lightweight, does not mark, and does not absorb water.

**What prompted you to develop this new type of foam?**

My three partners and I came across a solution to fulfill a consumer need that nobody was addressing. The Oofoam technology addresses the issue of stress in the body by absorbing more of the impact than traditional footwear foams on the market today. Athletes have been continuously increasing the intensity of their workouts and more people are joining the fitness and wellness movement.

Because of this we realized they were experiencing more and more issues with injury and pain. Currently, cushioning in athletic and fitness shoes offer a rebound affect causing your body to absorb a lot of this impact. Oofos introduces and innovative foam compound and footbed design that absorbs much more impact than today's foams allowing the body to recover. ●



**“For adidas, Gore is not just a superior supplier, but a great partner for innovation and future leadership.”**

*Rolf Reitschmidt  
Senior Vice President  
adidas Global Outdoor*



adidas believes that the TERREX concept with GORE-TEX® footwear technology is the perfect answer for light and fast consumer needs.



**Trusted brands choose GORE-TEX® product technology.**

GORE-TEX® is a registered trademark of GORE LLC. © 2014 GORE LLC. All rights reserved. GORE-TEX® is a registered trademark of GORE LLC. GORE-TEX® is a registered trademark of GORE LLC.

gore-tex.com  

# From Shear to Shelf



Sheep at home on the farm in Montana.

**W**hen relaying the situation of the U.S. sheep industry recently, executive director Peter Orwick, says, “We are in an upswing market now. We need to take advantage of the unique possibilities of wool and promote the U.S. supply base. In the United States, farms create 18 jobs for every 1000 sheep. This is a unique story that can be marketed by global brands and retailers.”

John Fernsall, president of Ibex, is doing just that. The Vermont-based apparel company will triple its use of domestic wool for Fall '13. “We are adding ranches and building relationships to have a consistent source,” says Fernsall. “In the past we have wanted to do more domestically but processing was not here. Chargeurs was a game-changer for us.”

Indeed, the re-introduction of the superwash process into the United States has had immediate impact. Production on the shrink-resistant treatment equipment line began in 2011.

Robert Chesebro, president

of Wigwam Mills, states that, “Before the superwash process was re-introduced into the United States last year, American wool top had to be shipped to China (7227 miles) to be treated, then to England (5070 miles) and finally to South Carolina (4094) before it could be manufactured into socks.”

According to Diego Paullier, Chargeurs Wool USA commercial manager, “Superwash has opened new markets and created more demand for American wool.”

The “buy American” movement is an important factor within this emerging trend. And not just for the American sheep farmers. Alpaca farmers also see growth opportunities and have lately made significant strides to bring domestic alpaca product into the mainstream.

The formation of Alpaca United (AU) is a new initiative aimed at making the fiber more competitive in world markets. It was created and funded by the North American Alpaca farmers and



Alpaca born and bred in Hampton, CT.

processors and is an outgrowth of the vision and commitment of the Alpaca Owners & Breeders Association (AOBA).

Chair Lee Liggett, on behalf of the board of directors explains, “We have spent this first year wrestling with the issues establishing the legal entity, generating phase one funding, building brand awareness and educating commercial textile companies and downstream product manufacturers and retailers on the performance characteristics of our fiber, it is now time to turn our attention to the fiber supply chain and build a commercially viable infrastructure

from farm to market through our phase two initiatives.”

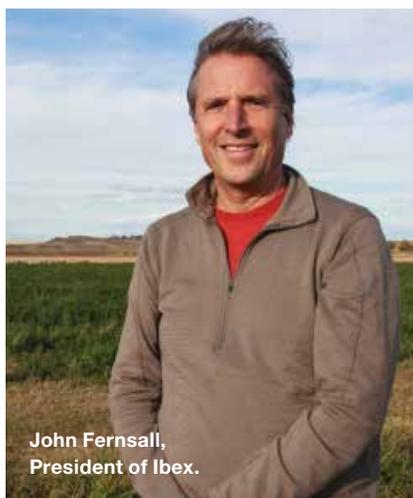
Nick Hahn, a veteran textile marketer, hired to help launch Alpaca United, adds, “I’m a firm believer that supply follows demand. We have introduced North American alpaca fiber to domestic and international markets through creative branding and marketing, the industry now requires a commercially viable infrastructure to collect, sort, grade, bale and ship in a format acceptable to commercial textile companies.”

Alpaca farmer Steve Putney is enthusiastic about AU efforts.

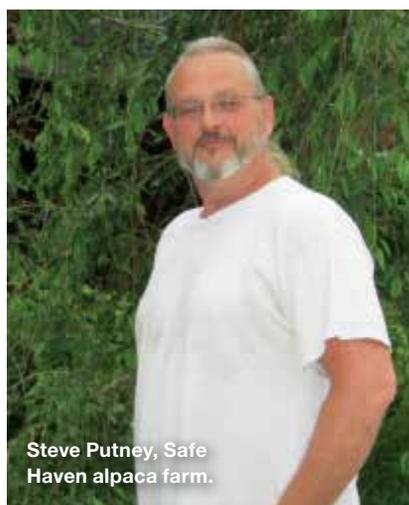
“We want to build interest in the fleece and build value in the fleece. We want to move beyond a cottage industry to sell the yarn. And we are now producing American made product. Pendleton, out of Oregon, has an alpaca blanket.”

Another element aiding the development and demand for domestic fiber is consumer desire for transparency. “People want to know where things come from and how it is created,” says Putney.

Fernsall agrees, explaining that “it’s like food, consumers want to know who grew the veg-



John Fernsall,  
President of Ibox.



Steve Putney, Safe  
Haven alpaca farm.

etables, and know where the fish were caught. It's the same now with clothing."

#### On the Farm with Suris and Huacayas

There are roughly 7000 alpaca farms and about 240,000 animals in the United States. Steve Putney's Safe Haven Farm is home to 91 alpaca on close to 100 acres of land in the small town of Hampton, CT.

Like others in the alpaca business, Putney is part of a resurgence of the family farm. "There is a trend to get down to basics again and lots of young couples as well as people looking for a second career are now raising alpaca," says Putney, who left his job as a radio broadcaster to take over farm duties six years ago.

In general, alpaca is as soft or softer than cashmere, and warmer than wool, according to Putney. It is considered a luxury fiber, having been used in the Italian market for a long time, and is indigenous to South America.

There's no lanolin present, so alpaca fleece is hypoallergenic and unlike wool scouring is not required. Additionally, when blended the alpaca allows other fibers to "bloom" around it. However, a 100 percent alpaca is most desired.

"There is a huge movement toward natural products and natural dyes and that is great for us," says Putney. "We are green in that there are 22 natural colors from alpaca. But also the structure of the alpaca fleece allows for natural dyes to set easily and not fade," explains Putney.

He owns two kinds of alpaca:

Huacayas and Suris of all ages and colors. Huacaya alpaca grow soft bunches of crimped fleece offering some inherent stretch. The fleece is rather rich and dense in texture. The lightweight fleece of a Huacaya alpaca can be spun into thin textiles ideal for form fitting garments. The Suri has more staple length, and a silk-like luster, and Putney suggests a 30/70 Suri/Huacaya blend is ideal.

Putney partners with Still River Mill, in East Ford, CT, where the alpaca fleece is washed and processed.

"About four years ago the focus shifted to bring new people into the business. Now, with Alpaca United there's movement to grow to a larger scale," Putney says.

#### On the Farm with Rambouillet

"We are definitely seeing more interest in USA wool," says Rita Samuelson, wool marketing director, American Sheep Industry (ASI). "There is more commitment to U.S.-based businesses and in particular the knitwear companies because the technology is here."

Military interest is also an influence. Having wool that is grown and processed here allows products to be sold to the Department of Defense as all-American made with shorter lead times in getting precuts, reduced freight costs and an opportunity to buy smaller quantities.

As stated in a Natick press release, "The decision to take a second look at wool as a high-performance fiber was due to improved explosive device, or IED, issues in Iraq and Afghanistan." Wool is inherently fire-resistant and has other performance fea-

tures well-suited for military end-use in apparel and socks.

A successful wool program could provide millions of dollars in new revenue and outlets for sheep producers across the country and help ensure the United States maintains a domestic wool processing industry.

U.S. sheep are a French Merino breed called Rambouillet. According to Samuelson the wool can be as fine as 18.5 to 19 micron, which is comfortable for next-to-skin applications.

As of Jan. 1, 2012, there were 5.35 million head of sheep in the United States, a number that has hit a plateau. The challenge to growing the flock relates to pricing. "Until about four years ago, prices hadn't changed from the 1980s," reports Samuelson. "We need higher prices because that bodes well for the sheep producers and if they are doing well then the industry does better.

We have to progress; the prices are beneficial to all."

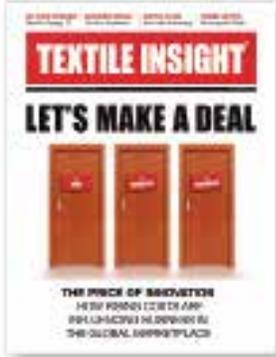
According to Ibox president Fernsall, the advantage of domestic wool includes lower transportation costs, growing consumer interest and "it just feels right." Ibox is expanding its wool program to include five more ranches in Montana and potentially getting another U.S. wool source for its sock program. In addition to processing in South Carolina, spinning and knitting is done in North Carolina. Cut and sew is also U.S.-based in California, as well as expanding to Vancouver, Canada.

Fernsall sees potential in wool for warm weather wear, and projects increases of 30 percent in this emerging category. "In the past, sales in April may have been Fall product on sale. Now, however, people are realizing wool for spring and summer."

And if it is all-American wool, all the better. ●

## GET MORE INSIGHT

archive issues now available at [textileinsight.com](http://textileinsight.com)



**LET'S MAKE A DEAL**

THE PRICE OF INNOVATION  
HOW FIBERS LIKE WOOL  
REPLACED HERD BY  
THE GLOBAL MARKETPLACE



**TECHMAN**

USE OF  
Wool  
and  
wool  
in  
the  
textile  
industry  
is  
growing  
and  
the  
textile  
industry  
is  
looking  
for  
ways  
to  
improve  
its  
efficiency  
and  
productivity

ALSO THE  
MULTI-SPIN  
GROWS UP FOR  
BUSINESS!



**FACE TIME**

An in-depth  
look at  
important  
branding  
is an  
increasingly  
complex  
and  
confusing  
(perplexing)  
market.



**POINTS AHEAD**

NAVIGATING THE TRAIL  
OF FABRIC TECHNOLOGY

to subscribe visit [store.formula4media.com](http://store.formula4media.com)

**FORMULA4**  
MEDIA, LLC

Uber-Urban Outdoor Menswear Takes Shape Stylishly

# LUXE-FORMANCE

**T**he fusion of fashion and function has gained traction over the past few seasons, bringing trail to sidewalk in apparel that relies on technical fabrics to create city-style wear. Now, however, a new breed of clothing is coming of age that takes the “urban outdoor” concept up a notch — or two, or even three. In the newest collections, the outdoor element is subtle while the sophistication of design becomes more obvious. Price points are high and distribution goes beyond conventional outdoor specialty

to seek boutique and department store sales. Textiles of choice are high-performance and critical to the DNA, but the look and hand of these contemporary garments is luxe. An important textile player in this emerging category is Schoeller, working with a range of up-and-coming, bi-coastal designers. Other technical fabric suppliers are sure to come aboard quickly. Such is the momentum for high-function, fashion menswear that a special section devoted to the category will showcase at the trade event (capsule) in New

York this summer. Called Above Tree Line, the focused expo is designed to appeal to both top directional retailers, editors, bloggers and tastemakers as well as the niche outdoor clothing and equipment community. “Not to mention the surging number of urban athletes who wish to seamlessly combine their recreational activities with their usual style,” according to show organizers.

*Here’s a look at a selection of luxe-formance garments:*



**Andy Gothings**  
Principal, Salence

**Salence: Outerwear with High-Tech Style**

Appropriately, this brand debuts with a “Bridge” collection of men’s outerwear. “We are bridging a gap,” explains principal Andy Gothings. “We are taking tech into the men’s stylish fashion market.” Each of the seven garments are named for elements of bridge construction and are engineered to perform. Jackets are waterproof/breathable, seam-taped and sport technical YKK zippers. Yet the cut is slim and tailored, minimally-fussy with branding only on the snaps. Neat details include retractable cuff pockets ideal for a metro card and nifty arm pockets for a cell phone. Featured textiles are

boiled wool needle-punched to tafetta, Climashield insulation, and Schoeller Nanosphere. Suggested retail prices range from \$300 to \$895. The Tannery in Boston, and PrimoSports, Breckenridge, CO, have picked up the line.

The company has an office in Hong Kong and manufactures in China. However, Gothings and principal partner Whitney Hunter reside state-side. Both men have a background in the clothing business. Noted outdoor apparel designer Carol Owen was instrumental in the Salence launch garments. “Our aesthetic is urban and the materials are very techy,” says Gothings. “But you don’t want to look like you just came off ’nali.” ●



**Shannon Walton**  
Public Relations,  
Schoeller Textiles

**City Cyclists, Race Cars and the Urban Gentleman Inspire the Latest Looks**

**Outlier** has been riding high since launching its urban cycle/commuting wear line just a few seasons ago. But this Brooklyn, NY, brand continues to evolve with a wider range of looks and fabrications. New slacks, for example, feature a stretch cotton technology sourced from Schoeller’s Turkey factory. The material allows for a sleek silhouette yet comfortable fit and natural fiber feel.

**Luna-C** brings high-tech elements of racing to sportswear. The company combines a passion for cars, racing, technology and style to create high-end lifestyle clothing for men. “There’s a frame of mind required to participate in any kind of racing – sports cars,

motorcycles, cycling, or the race of life,” says founder Lee Davis, who is a race car driver. Luna-C designs reflect this edginess. An interesting detail is the use of Kevlar. The carbon fiber fabric is used as an accent on shirts to add visual appeal but also provide durability and abrasion resistance. The company also uses Schoeller coldblack in other garments.

**Proof** is a brand new company seeking a spot in the men’s shorts market. The tailored shorts are stylishly functional. “Without the technical textile these are just a pair of fashion shorts,” says founder Omar Rada. “The urban gentleman doesn’t want a baggy short.” Designed with a slim fit and 1950-60’s-ish cut the Proof short uses Schoeller DrySkin with Nanosphere. ●



# COLOR



## It's A Bright, Sunshiney Day

Designers have pumped up the color palette for next season, with everything from casual footwear to uber-technical outerwear showing off the latest high-volume hues. There is a fashion influence at work, to be sure with super-colorful clothes ruling runways and city sidewalks of late. But psychology plays a role, too; cheery reds, sweet oranges, sky blues and lush greens offer visual relief from the world's dreary economic and political news. As one designer suggests, "Color is fun. The brights lift your spirit and make you smile."

**Arc'Teryx:** Not so long ago the outdoor apparel landscape was dominated by earth tones and lots of dark shades – such as black, black and more black – with maybe a sprinkle of rugged red or navy. In a word: forgetaboutit. One glance at the latest line-up from Arc'Teryx and it is very clear that outdoor colors have brightened and lightened for year-round wear. The jackets shown here have all the performance properties an elite athlete could wish for — technical fabrics, savvy

construction, functional detailing, but the rainbow range gives way to a much more contemporary vibe.

**Volkl:** The ski business is no stranger to strong use of color. Indeed industry designers have traditionally shown no fear when it comes to taking advantage of powerful, eye-catching dyes, from blasting neons to wild color combinations, even though the category endured a monochromatic dark phase not that long ago. Now, however, brights are back and Volkl Performance Wear elevates the visual with innovative prints. Shown here are the men's prism print Silver jacket and women's Silver Star featuring a unique splash-style print in vibrant pastel for the 2012/2013 winter season.

**Teva:** Dorothy's ruby slippers have nothing on these bright red kicks. What looks like a fun summer sneaker is actually super-functional footwear. Designed to go from the water to the nearest watering hole, the shoe has Ion-Mask technology to keep feet dry and a non-slip Spider Rubber outsole. Wet rocks or slick bar floors are no problem. ●



**Tech-nicolor:** Function gets a blast of brightness ranging from new hard-shell jacket technology from Arc'Teryx highlighted in vivid shades to distinctive prints from Volkl Performance Wear for men's and women's ski and red hot, multi-purpose Fuse-ion shoes by Teva.

**BLACK** offers high contrast and offers a sleek, modern look with reduced weight through giving your wardrobe, technical, outdoor and ready-to-wear the perfect visual effect, a blacker black. The black color is spun into the polymer fibers for a construction that reduces the weight for the same design effect and reduces the weight and waste.

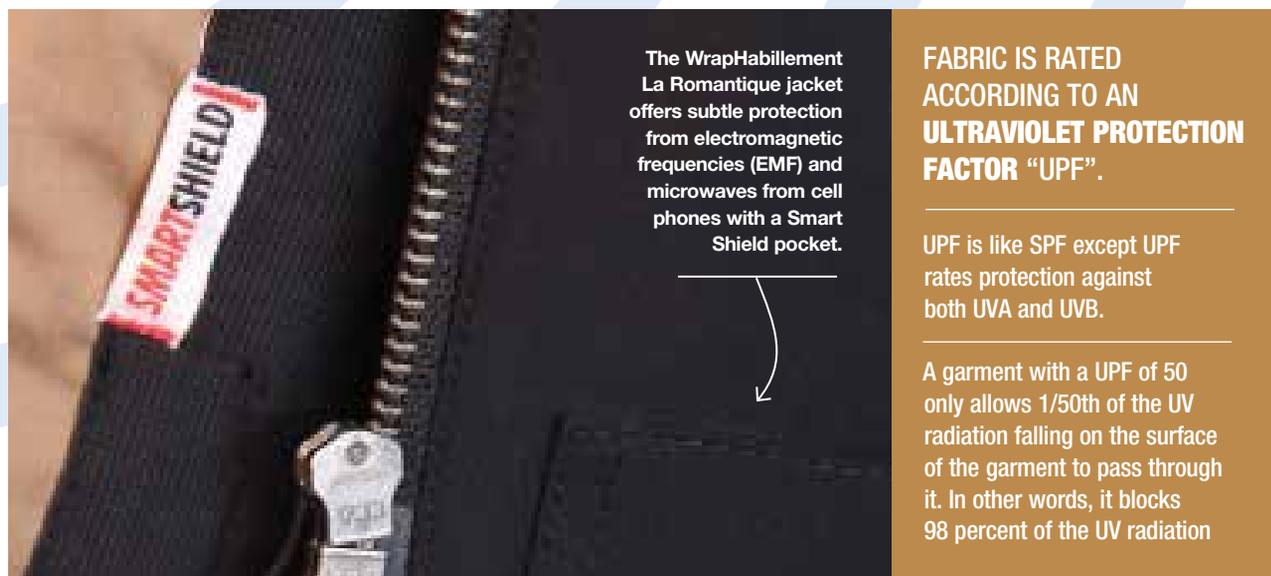
**PERFORMANCE** offers performance and durability for outdoor and athletic use. The lighter weight, high performance and moisture resistance, it also delivers improved breathability with technical properties that are designed for the most demanding conditions.

**creora**  
It's in our every fiber

## TECHNOLOGY

Forget about wind, rain and snow, the latest developments keep the wearer safe from sun, pests and hidden dangers **By Emily Walzer**

# New Age Protection



The WrapHabillement La Romantique jacket offers subtle protection from electromagnetic frequencies (EMF) and microwaves from cell phones with a Smart Shield pocket.

FABRIC IS RATED ACCORDING TO AN ULTRAVIOLET PROTECTION FACTOR "UPF".

UPF is like SPF except UPF rates protection against both UVA and UVB.

A garment with a UPF of 50 only allows 1/50th of the UV radiation falling on the surface of the garment to pass through it. In other words, it blocks 98 percent of the UV radiation

As much as the folks in R&D try to outwit her, Mother Nature continues to pose challenges. Victory looked close at hand years ago with the advent of waterproof/breathables and windproof textiles. Another win or two was notched just recently with the advent of technical down and performance cotton. However, despite past efforts a new batch of problems seems always to arise. This season technologies take aim at harmful UV rays, nasty little critters and yes, even cell phone radiation.

### Consider these every day statistics:

- One in five Americans will develop skin cancer in the course of a lifetime.
- Over the past 31 years, more people have had skin cancer than all other cancers combined.
- 40,000 cases of Lyme disease are documented in the U.S. alone every year and health experts are predicting 2012 to be the worst year for Lyme ever.
- While still subject to debate, cell phone radiation is being regarded in the same risk category as negative effects of second hand smoke.

Adding to the development of new technologies these days is the keen interest in being eco-sensitive.

More so than ever, brands are trying to introduce performance that goes hand in hand with environmental sustainability.

### Here Comes the Sun

When it comes to UV protection, many clothing outdoor clothing manufacturers realize there are two trends to consider. Not only are customers increasingly aware of the threat of skin cancer, but yet are spending longer time outside running marathons, fly fishing, golfing and even backyard gardening.

The first line of protection, materials managers report, is smart fabric construction and yarn choice. Being environmentally-responsive, outdoor makers look first to fabrics that are inherently UV protective in an effort to steer clear of added chemicals. Tight weaves of poly or nylon are common. Color plays a role as well. A top quality control is to measure UPF values before and after several fabric washings. This assures any claims of durability. The AATCC test method 183 is referred to consistently as a standard.

New research at North Carolina State University looks at nano-scale films for UV protection. The process is borrowed from the microelectronics industry and offers several benefits. Importantly, the films

are lightweight and do not interfere with textile performance.

Essentially, researchers introduce gases to the substrate which react on the surface to form an extremely thin nano-coating. It is similar to how films for electronics are produced but on a textile. The vapor phase process adds UV protective properties that are colorfast and don't sacrifice breathability or comfort.

### Here Come the Ticks

This tick and mosquito season are being considered the worst ever due to the warm winter of 2011/12. It's not surprising then that technology to repel these pests is in the spotlight. While not new to the marketplace, Insect Shield is making significant strides not only in outdoor but other clothing categories such as industrial and workwear. The company has increased its outdoor presence with brand partners such as Ex Officio, Orvis, L.L. Bean, Buff, Tilley and dozens more. This season Outdoor Research expands its apparel selection in addition to hats and gaiters. Sea to Summit now has a wide assortment of Insect Shield products.

Insect Shield is proven and registered to repel mosquitoes, ticks, ants, flies, chiggers, and midges (no-see-ums). The repellency is

long-lasting (through 70 washings) and appropriate for use by the entire family without restriction, according to the company.

Insect Shield's own testing methods follow United States Department of Agriculture (USDA) guidelines, and according to the company, the results conclusively show that the protection works

### Here Comes the Radiation

WrapHabillement is a new eco-focused brand designed by Elizabeth Roberts, who combines high-fashion with function using all bluesign certified fabrics for her stylish women's wear. A detail of particular interest in her clothing collection is the patent pending Smart Shield pocket system in every jacket. This element is designed specifically to reduce the risk of radiation from wearer's cell phone.

The concept for the innovative pocket stems from efforts in China to protect pregnant women in manufacturing plants from radiation.

### Here Comes the Bacteria

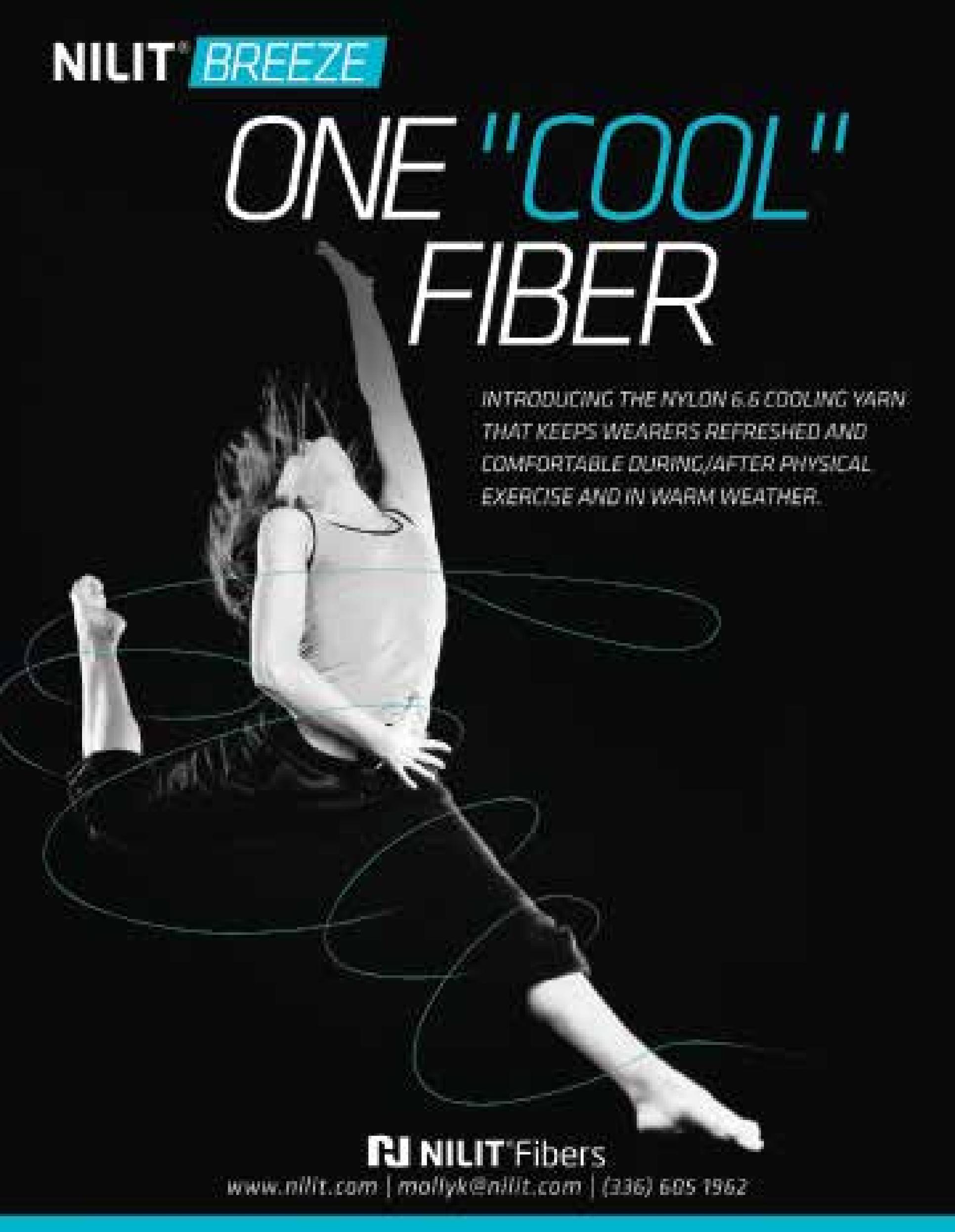
Sweat alone is odorless, but it is creates conditions where bacteria thrive which results in unpleasant fabric stink. Polygiene brand conducted focus groups revealed that 30 percent discarded a garment due to odor after washing and over 50 percent would pay more for an odor-free garment.

In Polygiene treatment, low concentrations of silver salt made from recycled silver are used to deliver active silver ions that naturally inhibit growth of bacteria. Totally sustainable and easy to apply, Polygiene is bluesign approved and does not require any binders, which are often based on toxic substances, such as formaldehyde. Testing of both durability and odor-inhibiting performance is done according to internationally accepted standard methods, AATCC 135 and mod AATCC100. ●

NILIT® BREEZE

# ONE "COOL" FIBER

INTRODUCING THE NYLON 6.6 COOLING YARN  
THAT KEEPS WEARERS REFRESHED AND  
COMFORTABLE DURING/AFTER PHYSICAL  
EXERCISE AND IN WARM WEATHER.



**NILIT®** Fibers

[www.nilit.com](http://www.nilit.com) | [mollyk@nilit.com](mailto:mollyk@nilit.com) | (336) 695-1962

## EDUCATION

The University of Alabama Develops Composite Products Using Recycled Carbon Fiber **By Kathlyn Swantko**

# Leading the Way in Research

The University of Alabama at Birmingham (UAB), with its Materials Processing and Applications Development (MPAD) Composite Center, is leading the way in research on the use of carbon fibers in composite materials for a variety of industry applications. While materials science and engineering programs at other universities are also conducting research on the commercial use of composite materials, few have been as successful as UAB's MPAD. UAB began its activities in 2001, and in 2004 opened the MPAD manufacturing facility.

Uday Vaidya, professor of materials science and engineering at UAB, states, "Carbon fiber is of emerging interest in a variety of end-use applications, because of its potential for significant weight reduction that minimizes fuel and lifecycle costs."

In 2009 as the interest in MPAD's research grew, Innovative Composite



PhD Students: Alejandra Constante and Samuel Jasper working on natural fiber extrusion.

Solutions (ICS), LLC, became an independent small business spin-off of the MPAD Composite Center. ICS now works closely with MPAD and specializes in the commercial production of advanced thermoplastic composite materials for a variety of industries.

Madan Moudgal, director of business development for ICS, states, "Carbon fiber has a broad range of applications in our production, because the fiber has superior specific strength (ratio of strength to weight) and specific modulus (ratio of modulus to weight), compared to other components like aluminum or glass fiber. This makes carbon fiber an attractive material for many industries."

Potential end-uses for sporting goods made from carbon fiber composites can include

kayaks, paddleboats, fishing rods, sports helmets, skateboards, surfboards, backpacks, and small boat hulls.

However, due to the high cost associated with virgin carbon fiber composites, MPAD has been conducting extensive research on recycled carbon fiber. Vaidya explains, "The possibility for lower cost recycled carbon fibers is very exciting! Selectively, recycled carbon fibers can replace or complement steel, aluminum, thermoset glass, and virgin carbon fiber parts for a broad sector, with many applications yet to emerge."

According to Dr. Vaidya, the UAB team works in collaboration with industry partners, such as Materials Innovation Technologies Recycled Carbon Fibers (MITRCF) to evaluate the manufacturing feasibility, testing and applications for recycled carbon fiber mats, roll goods and intermediate material forms.

Graduate and undergraduate students are an integral part of the MPAD center program. Vaidya explains, "Currently, there are 14 graduate students and eight undergraduate students working in the MPAD center. The students contribute to R&D projects and gain experimental learning as part of their work in the facility. The experience the students gain make them valuable hires in the engineered plastics and composites industry, for which there is a growing demand."

Going forward, Vaidya notes, "The core goal of MPAD is two-fold: Besides creating the next generation work force that is knowledgeable in engineered plastics and composites, we also want to work closely with industry in solving problems aligned with industry needs, and maintaining our facility as a resource for applications-oriented R&D."

Vaidya is looking beyond local industries to the global needs for composites. He states, "While there are several schools involved with basic research in materials, our team at UAB is focused, not only on application-oriented work to support our local industries here in Alabama, but also to meet the growing global demand for composites applications." ●

For more information on the University of Alabama's MPAD Composite Center, contact Dr. Uday Vaidya, 205-410-2898 or [uvaidya@uab.edu](mailto:uvaidya@uab.edu). For more information on Innovative Composite Solutions, LLC, contact Madan Moudgal, [mgmoudgal@innovativecompositesolutions.com](mailto:mgmoudgal@innovativecompositesolutions.com), or 609-558-3060.

*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.*

An advertisement for two textile industry networking sites. At the top, it says "The Networking Sites for the Textile Industry". Below this, there are two logos. The first is for "FabricLink", with the website "FabricLink.com" and the tagline "Trade-to-Consumer". The second is for "The Technical Center", with the website "theTechnicalCenter.com" and the tagline "Trade-to-Trade". At the bottom of the ad, it says "Check out the opportunities to effectively get your message out!". The background of the ad features a repeating pattern of the words "Marketing", "Networking", and "Trade-to-Trade".

**Source** materials and components from the world's top suppliers at the Apparel and Footwear Materials Show.

## **NE Materials Show**

**September 11 and 12, 2012**

Double Tree Hotel  
Danvers, Massachusetts

## **NW Materials Show**

**September 19 and 20, 2012**

Oregon Convention Center  
Portland, Oregon

### ***Partial Exhibitor list includes:***

3M, Daewoo, Huachang, Faytex, Ortholite, Clarino, Mogae, NIFCO, Wei Tai, Worldwide Materials, Texon, Rogers, Trendware, DuPont, Wolverine, Coats, San Fang, Huafang and many more...

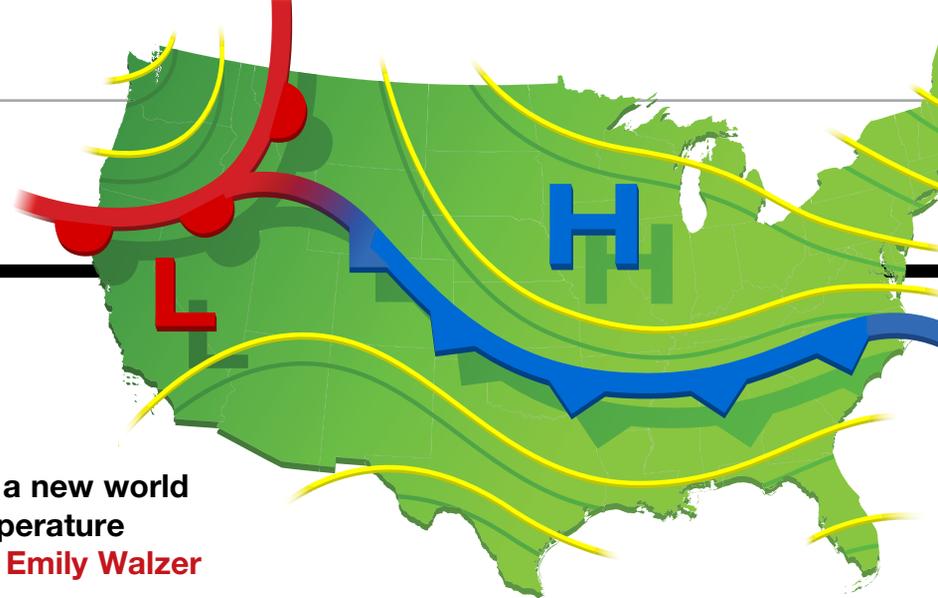
### ***Partial Buyer list includes:***

Nike, adidas, New Balance, Stride-Rite, Columbia Sportswear, Timberland, L.L. Bean, VF Corporation, Brown Shoe, Skechers, Deckers, Reebok, Puma, Converse, Under Armour, Clarks, Tom's and more...



To exhibit or attend visit,  
[www.americanevents.com](http://www.americanevents.com)

Email - [info@americanevents.com](mailto:info@americanevents.com)  
Phone - 503-642-0977



# WEATHER REPORT

Dressing for a new world order of temperature extremes **By Emily Walzer**

**12**

We asked a dozen industry people for their thoughts on textiles in regard to record-breaking temperatures and weather extremes. Here are their fabric forecasts.

According to the National Climatic Data Center, the average temperature for the contiguous United States was 8.6 degrees above the 20th century average this past March. Since record keeping began 117 years ago, only one month, January 2006, has seen a larger departure from its average temperature than March 2012. Exactly 15,272 warm temperature records were broken.

However, during March 2012, other areas around the globe were experiencing very cold temperatures.

What does this mean for textile development? Are designers reacting to climate change? Is a new style of wardrobe emerging to adapt to increasingly wild weather conditions?

A few trends are taking shape. For example, cooling properties in the form of feather-weight materials, including light insulations, open weave constructions and sun-reflective features are increasingly prevalent. As is overall design versatility and thermo-regulation. Actual cooling technologies are also being introduced (see OR Preview story, page 6). And new buzzwords are entering the conversation such as “cross-seasonal,” “transitional,” and “the 8-month jacket.”

There is also heightened environmental consciousness not to contribute to climate change with designers seeking non-toxic, sustainable solutions to material selection and manufacturing methods.

A concern over inventory is also part of the discussion. A mild 2012 is one thing, but a series of above average winters is another. Already retailers and brands are sitting with inventory, a situation that could easily escalate without a stormy 2012-13.

**David Parkes, President, Concept III**

“People are re-thinking based what is going on with milder winters. There is a definite trend to lighter weight insulations – 30, 40 or 60 grams—for clothing that is transitional. An 150 gram insulation may not be required. There is more and more talk about an 8-month jacket that you can use from September to May. There is still purchasing going on for Fall/Winter '13 apparel, but if it is mild again, there is concern the inventory situation will snowball.”

**Alan Yiu, Founder and President, Westcomb:** “I think the goal in the way we dress still remains the same — looking good while remaining comfortable, whether that means staying warm, dry or cool. I don’t think people are necessarily dressing more for the weather rather than just being better prepared for it — carrying a lightweight shell or down sweater. At Westcomb we have seen a design shift for products to have greater portability and packability without sacrificing performance. While this wasn’t predicated by climate change, it certainly highlights the benefits of products that are versatile. Without a doubt, as the first layer of defense, textiles play a critical role in managing extreme weather conditions. A shell/outer fabric’s ability to keep the elements out is directly attributed to its DWR, membrane type and weave construction. A lining or knit’s insulation efficiency is dependent on its construction, density, and how much air it is able to trap. I think the solution to the drastic weather



is a wardrobe full of versatile pieces that work in combination with one another in a myriad of conditions. This concept isn’t new to our industry as many backpacker’s face the same challenge; how to pack fast and light for, not all, but a range of weather conditions.”

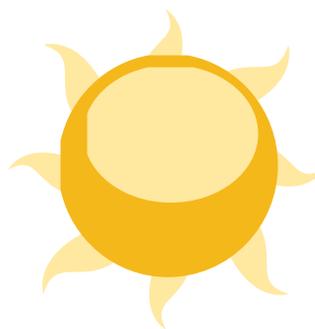
**Steve Richardson, Director of Material Development, Patagonia:**

“It’s not just warmth, but more chaos. One day is 90 degrees, the next is 40 degrees. You need to consider swings in weather. The idea of ‘rounding things off’ brings more lightweight options, such as ultra-light wool and the lightest possible base layers. The 20 denier fabrics are the new 50 denier.

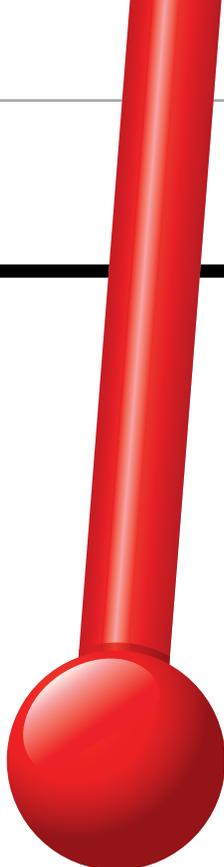
Also, the concept of layering is becoming more lifestyle. Our Steersman shirt is, for example, superlight, organic cotton fabric with a crepe-like crinkle that lifts away from the skin to promote cooling. We are also launching an insulated piece for Spring. Insulations are lighter and these are becoming our most popular.”

**David Kappeler, Sales Director, Tilley**

**Endurables:** “We do look for lightweight breathable fabrics that are UPF 50+. From the start (1984) our hats have always been an excellent form of sun protection but in the last few years we see more and more consumers gravitating to our brand as a result of the need for proper sun protection. The new fabric collection is made from recycled hemp and organic cotton yarns — essentially those pieces that are ‘leftover’ from the manufacturing of other Tilley Hats. When put together they create this ‘mash-up’ fabric that is environmentally friendly, breathable, lightweight and certified UPF 50+.”



**Kelsey Goodrich, Marketing, Gramicci:** “Because of the drastic climate changes we do think consumers are looking for more versatility in their clothing. We believe they desire garments that are cross-functional. Our styles that are made with our proprietary Natural Performance Technology – NPT fabrics – do exactly this, as they are designed for sport and life. The fabric is made from pesticide, insecticide and herbicide free durable hemp and GOTS certified organic cotton. The shirts are woven in such a way that as the hemp naturally wicks moisture away from the skin, the shirts in turn dry that moisture out super fast. Hemp is naturally anti-microbial, and therefore eliminates body odor from the garment. Hemp also naturally regulates body temperature so it keeps you warm in cool climates and cool in warm climates. Our solution is that we look to the Earth for answers on how to adapt to the climate change. We do not go synthetic. We do not go chemical. We try not to add to the problem, but look for ways to better the situation for more than the population currently here on the Earth, but for future generations as well.”



**Lauren Wall, Apparel Product Line Manager, Brooks Running:** “Runners are expecting more versatility in their apparel and that includes having options for every type of weather. At Brooks, we are constantly striving to provide runners with a wardrobe that can take on every weather condition from hot, humid summer days to cold, snowy winter nights. This innovation includes searching for new, unique materials that are great at wicking moisture, but also keep your internal temperature just right. One of these new fabrics is our D’Lite Micro Mesh. This super lightweight, translucent, moisture-transfer fabric is great for adding coverage without weight and warmth. When the temps aren’t as extreme, women can layer the bright colors to make their own custom looks. This fabric has really resonated with runners, so we will be offering even more options in Spring ’13.”

**Tricia Carey, Merchandise Manager, Lenzing:** “I do think people are addressing this. We cannot ignore that we had such a mild winter in the Northeast. Additionally there is more accessibility to global travel with various climates. People need multi-function and multi-climate clothing. For Lenzing, we introduced Tencel Sun and Lenzing Modal Sun about three years ago.”

**Carol Little, Materials Manager, Pearl Izumi:** “We have introduced a new material technology in our PRO and Elite categories called Transfer In-R-Cool. The fabrics in this category have cooling properties. In our PRO category, our fabrics actually reflect the sun’s rays even in dark colors like black. As a result, riders can wear black shorts that feel like white shorts. In our Elite category, we have a moisture activated cooling technology that can reduce the body’s surface temperature by more than 2°C. As a result, the athlete can work out longer and feel cooler. In addition, to these cooling technologies, all of our materials are engineered to quickly move moisture from the body keeping the athlete dry and comfortable.”

**Jordan Wand, VP-product and marketing, Outdoor Research:** “Our athletes look to us for products that keep them dry, cool and protected from the sun. Particularly in our Spring collections, we focus on fabrics that provide superior UV protection, moisture management, breathability and are quick dry. We continue to offer that in our apparel range but will also be offering several accessories that offer the consumer the same performance benefits for Spring 2013. For example, our Torque Tees offer moisture management fabric technology for aerobic pursuits in hot conditions. Polartec Power Dry fabric blends polyester yarns on the outside with polypro construction on the inside for exceptional moisture transfer and quick drying. Polygiene Active Odor Control provides antimicrobial properties, while UPF 15 aids with sun protection.”

**Paige Harvey, Senior Designer, Horny Toad:** “We do not focus primarily on climate control when we are designing individual pieces in our collection. Of course, as a company, we focus on our environmental footprint as a whole and try to contribute as least we can to the fundamental causes of climate change. When we are designing pieces in our line we try to focus on travel and being environmentally thoughtful with the usefulness of each piece. We make clothes that are useful in the widest ranges of temperatures. If a person is traveling somewhere warm and it turns out to be cold when they arrive we expect our clothes to still do the job and vice versa. So, yes, versatility is key and is the primary focus at Horny Toad.”

**Melissa Grace, Fashion Communications Manager, Australian Wool Innovation (AWI):** “The key message is that Merino wool is ideal to respond to such changing weather conditions due to its inherent ability to regulate body temperature and adapt to both hot and cold climates. The other key message is the natural benefits of Merino wool, as it is a renewable source and biodegradable at its source, it is the ideal choice for product that is considerate to the environment.”

**Claire Joyce, Product Manager-Running Apparel, New Balance:** Our focus at New Balance is standing for thermo-regulation. We want to ensure a runner stays cool on warm weather runs and stays warm on cold weather runs. We recognize that runners have very different needs around the world due to the varying climates so, it has always been imperative that our running apparel provides a lot of versatility for a runner in any weather conditions they may face. The Minimus collection features X-Static to aid with temperature regulation.”

# 3251

Number of 2011 monthly weather records broken by extreme events that struck communities in the U.S.

## Extreme Snowstorms

### Groundhog Day Blizzard

(Jan. 31 - Feb. 3)

Western Nebraska

(Apr. 14-16)

Early Snow

(Oct. 29)

## Extreme Floods

### Hurricane Irene

(Aug. 20-29)

Tropical Storm Lee

(Sept. 3-8)

## Heat, Drought and Wildfires

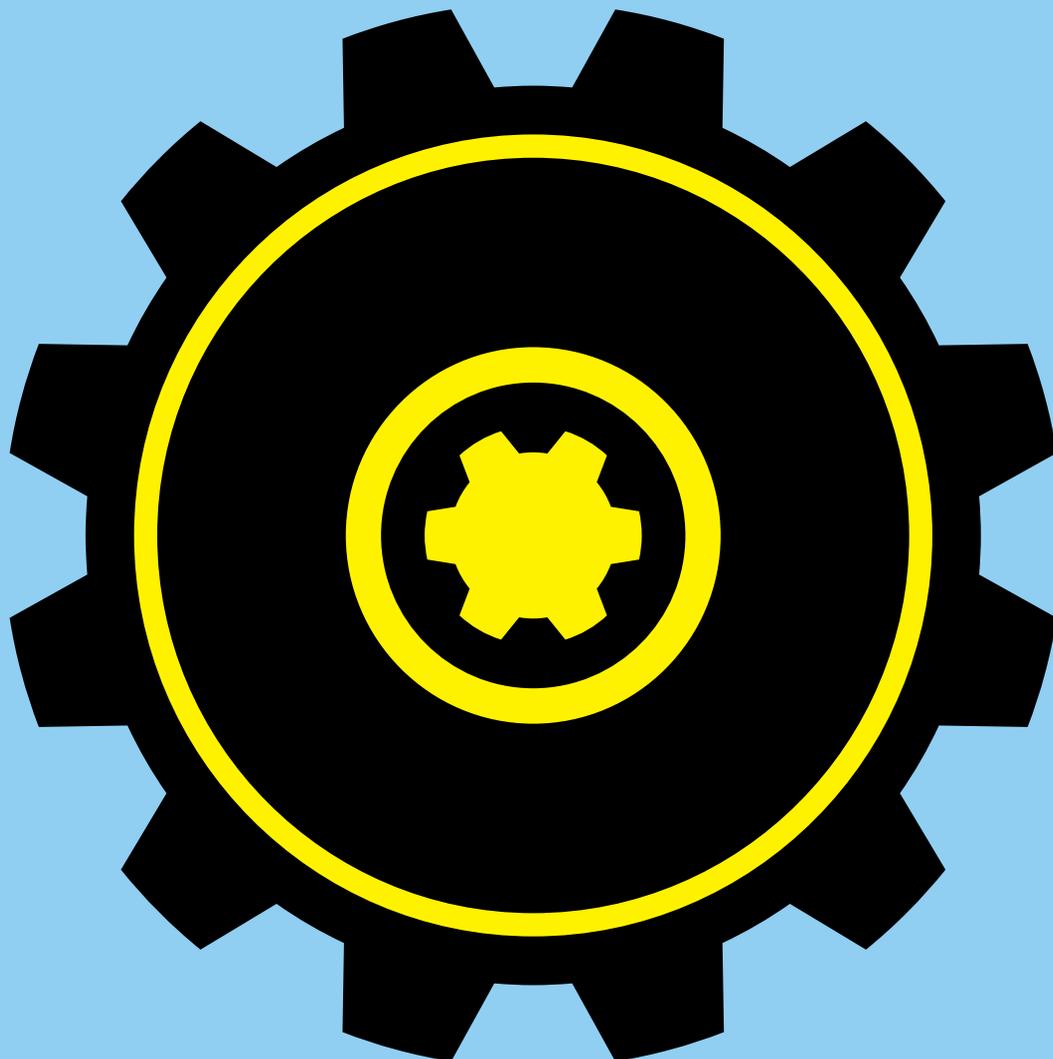
Greater than \$1 billion

in damages

(April – July)

The Adventure of Making and Marketing Technical Textiles from the Early Days of Big Chemical Company Research to Concepts on Brands' Drawing Boards Right Now. By Emily Walzer

# PERFORMANCE EVOLUTION



**T**here are times it seems as if progress on the performance fabric front is measured in the tiniest increments – tweaks and refinements – rather than giant leaps forward. But then along comes something really new, and BAM, you realize how far the industry has advanced.

Whether you believe we are now in a revolutionary phase of product development (or not) we are moving steadily along the evolutionary path. Increasing attention to the environment, the natural fiber renaissance and direct dialog with consumers via social media are a few of the important factors pushing improvements forward.

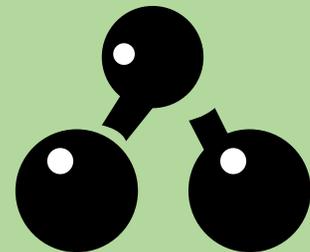
On the other hand, a challenging global economy, questions about the future of military spending and price pressure along the supply chain are major aspects currently inhibiting remarkable breakthrough innovation.

What follows are conversations with some of the pioneers and innovators of performance fiber and fabrics over the past forty years. This “brain trust” spans from executives who worked at DuPont in the 1970’s responsible for ushering in first-generation performance synthetics, to chemists currently on the front lines of development.

Recollections of the early days in technical textile R&D, in addition to predictions of future changes lend plenty of insight and potential answers to these key questions: How did we get here? Where are we now? And what’s next?



Note: Individuals interviewed for this article represent a very small sample of the many terrific people involved in textile advances over the years. The hope is to create a series of articles that continue this discussion with a wide range of designers, developers and suppliers who played a part in the evolution of performance fabrics. In addition, while this story focuses on domestic-based development, textile innovation is a world-wide business with critical research resulting from work in Japan and Europe as well as all corners of the globe.



### In The Beginning...

There were the big chemical companies and venerable textile mills. A stand-out was DuPont. The corporation was a powerhouse of R&D and a brand marketing machine. Yet according to ex-DuPont employees, what made the business succeed was the belief that “newness trumped everything else.”

In the textile arena in the 1950s through most of the 1980s this meant creating a whole new industry around the development of synthetics that imitated nature with functionality. For example, synthetic silk was nylon; synthetic rubber stretch became Lycra, etc.

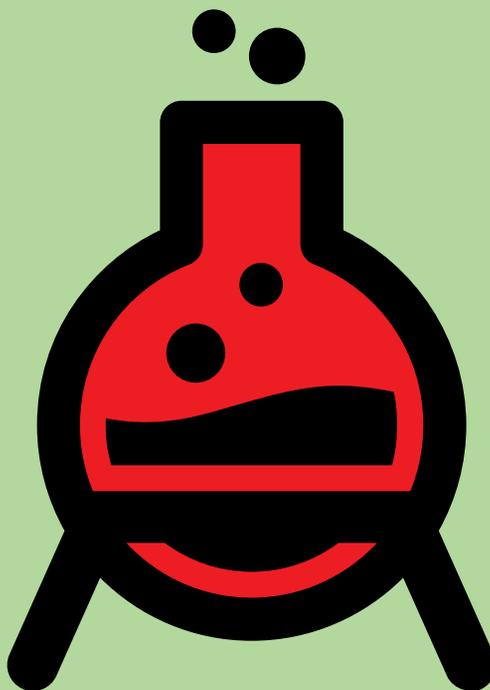
“You had huge differentiation and tons of benefits,” recalls Carol Gee, a marketing specialist who worked at DuPont for more than 25 years starting in 1979.

In addition, for a chemical maker DuPont was very savvy on how to send a message of an ingredient to the consumer. This was really unusual 30 years ago, says Gee, who recalls how, for example, Teflon was initially sold to makers of pots and pans, yet DuPont talked about the benefits to consumers. The same approach was taken introducing consumers to technical fibers for apparel applications.

DuPont did not “tweak” in those early days. Product was about something totally new and figuring out how consumers could use it. “This was eureka-in-the-lab” type innovation, according to Gee. And it resulted in DuPont brands like Dacron, CoolMax and Cordura, among others that became household names

DuPont was also a leader in marketing and promoting its fibers. “The company spent

## THE GORE-TEX GAME CHANGER



In 1958, Bill Gore left DuPont after 17 years as a research chemist to pursue market opportunities for fluorocarbon polymers, especially polytetrafluoroethylene (PTFE). Along with his wife, Vieve, Bill began the new business in the basement of the family’s home in Newark, DE. Ten years later, in 1969, the couple’s son, Bob, discovered that PTFE could be modified to form a strong, porous material — a game-changer if there ever was one. This discovery, expanded PTFE or EPTFE, led to the creation of Gore-Tex. The waterproof/breathable revolution in outerwear, and then footwear, was born.

Gore, with annual sales of roughly \$3 billion, continues to advance fabric technologies but also has built an enormous and diverse product range, including optical signal transmissions, medical devices that treat aneurysms and dental floss.

“It was then, and still is now, all about the consumer,” says Steve Shuster, who has spent his career with W.L. Gore.

money because it demanded premium prices. Money was spent on climbs to Mt. Everest and expeditions to the North Pole, and this gave credibility,” says Bob Van Dyke, who worked in the insulation sector selling and promoting the new fibers.

“I was involved with dozens of trade shows – Ski Show, Outdoor Retailer, SHOT – in the days of our introduction of advanced filling fibers for insulations such as Thermolite, Thermoloft and Quallofil, made from Dacron polyester, along with fabrics such as Cordura and Supplex nylon,” Van Dyke relates. “Back then there were lots of people interested in outdoor, from mountaineering to backpacking, but equipment was less than ideal. The people founding these companies were the ones doing these activities so they wanted something better to make the experience better,” he explains.

Greg Thomsen was one of these people. He founded Wilderness Experience in 1973 and spent a lot of time in DuPont labs looking at different materials.

“All this technology was coming out of DuPont, which had huge R&D. They were exploring how to keep the military warm not using down blankets,” recalls Thomsen, who saw the incarnation of TherMax, the first wicking base layer. “This was not the World War II technology. It was a new era. Cordura, for instance, was originally designed for military and the thread was

strong enough to stop a tank.”

Thomsen adds, “I would go to the labs and there were beakers and weights and scales and in one scale there was a grilled cheese sandwich and coffee was in a beaker — just mad scientists developing all this stuff.”

This trend of developing for military end use initially, which then trickles down to the mainstream, continues to this day.

But times began to change. “I think things may still be moving forward, but nothing gets promoted quite like in the earlier years,” says Thomsen, managing director for Adidas Outdoor USA.

Decades ago there were lots of small outdoor businesses springing up that could utilize the latest technology and the chemical companies such as DuPont were the means for advertising. Says Thomsen, “The industry at that time, it was a tapestry all woven together.”

### Another Day, Another Innovation

The likes of W.L. Gore, Malden, big guns such as Milliken, Burlington, Wellman, 3M, and converters like Travis Textiles in New York City pushed innovation to the hilt in the late 1970’s through the early 1990s.

It was rapid-fire development as new high-function synthetics took off. New insulations, waterproof/breathables, synthetic fleece, base layer fabrics that wicked all entered the marketplace in quick succession. It was so much, so fast that it became expected that



### INFLUENTIAL FACTORS IN THE PAST

1. MILITARY
2. OFF SHORE PRODUCTION
3. OLYMPICS
4. SUSTAINABILITY
5. DESIRE FOR ENHANCED COMFORT IN ALL CONDITIONS

# CATEGORY BREAKTHROUGHS

- **WATERPROOF/BREATHABLES**
- **SYNTHETIC FLEECE**
- **STRETCH WOVENS**
- **MOISTURE MOVERS**
- **ANTIMICROBIALS**
- **TEMPERATURE REGULATION**
- **TECHNICAL INSULATION**



something new came not just every season, but every month.

As one developer recalls, “It was a sea change.” He adds fondly, “It was a bunch of flower children that were into climbing and outdoor stuff and were looking for solutions. Big problems got solved and now everyone is comfortable.”

Essential to that time of innovation were relationships within the industry. “You really can’t develop fabric in a vacuum. There has to be a need and you have to have a trust relationship with a brand,” says one source, who asked not to be identified.

In particular he states, “You need a nerd and a creative type – the combination of left brain/right brain – one who defines the function and the other who defines the form.”

Someone like Mark Galbraith, for instance. “In the past you had well-funded developers, smart designers and strong brands. This

relationship was integral to innovation,” says Galbraith, general manager at Nau.

He also points to a bigger dynamic present in the past. “There were big corporations and a significant brand presence who could work in concert to create something. You had big breakthroughs like waterproof/breathables, fiber cross shapes, etc. Today is a mushy playing field. There are more brands competing. It is more commodified, more cookie cutter.”

The economics have changed as well compared to the R&D, operations and promotional efforts of decades ago. “Today you need to justify expenses and efficiencies are needed,” adds Galbraith.

Others agree that economics have played a major role in the different stages of performance materials evolution. “I can’t remember a time when the textile business was not competitive, and not tough,” says David Parkes, Concept III president. “But back in ’70s and ’80s there were so many new brands emerging — a whole new outdoor industry was emerging. It was like the birth of the Internet — explosive and price was secondary. We’ve been in a different phase for the last 15 years and the economy is a factor. These days price rules.”

## Changing Times

A turning point for textiles came when production moved overseas, and it changed more than just physical location of factories. “I’m not saying it changed for better or for worse, it was just different,” says Thomsen. “Relationships were now more with the factories. There was more talk about bigger orders and fewer intimate conversations about kayaking and trying out the latest neoprene.”

Increasingly efforts went into pattern, fit and components. Gender-specific sizing, body mapping, articulation and design

details like waterproof zippers and pocket structure became significant, and innovation on the fabric side was subdued. Building a better product through advanced garment construction became the trend. Truly talented garment makers like Arc’teryx emerged raising the bar for outdoor apparel performance.

After decades of dramatic development the industry entered a phase of “tweaks.” “The shift to China, and how the Asian firms innovate has influenced this,” says Parkes.

Galbraith expresses a similar sentiment. “We lost a degree of craft-based innovation in the outdoor industry. With the loss of domestic textile mills and shifting base of production, it is less hands-on and de-personalized,” says Galbraith. “Now it’s more out-sourced and there is more expertise at the factory level and less old-world craftsmanship.”

Others don’t disagree, but also consider the extreme difficulty of bringing new fibers to market in today’s industry. “Look at the necessary qualities: fine size, great tenacity, abrasion resistance, pill resistance, colorfastness, UV colorfastness,” says Randy Harward, a vice president at Patagonia. “A truly new fiber introduction would be a big event in textiles. We have more to work with: polyester, nylon, rayon, spandex, etc., whereas in the past there was cotton and wool. There’s a lot more on existing material than new. But that’s true in any technology. Cost efficiencies and a knowledge base increasing dramatically also factor in.”

Harward continues, “There are only a handful of fibers you can really count on, so people keep going back to them. Wool is a good example. We’ve [the industry] has circled back and created technical wool.”

Some believe this re-focus on natural fibers has put a dent in tech innovation. There is no longer the desire to replace wool, or cotton, but rather enhance the natural fiber.



## INFLUENTIAL FACTORS IN THE FUTURE

- 1. New Test Methods**
- 2. Savvier Consumers**
- 3. Ecology Efforts**
- 4. Unstable Global Economics**
- 5. Desire for effective personal temperature regulation**

STUDIO

E

Environment • Economics • Ethics

## Sustainable Solutions

A special section defining how your company's eco-initiatives are paying big dividends for your brands, partners, and the environment.

TEXTILE INSIGHT

Issue Date  
September/October 2012



### Studio E

September/October 2012

Ad Close August 24, 2012

Contact Information

Jeff Neri, Publisher

518-305-4711

[jeffneri@textileinsight.com](mailto:jeffneri@textileinsight.com)

or your account manager

“The popularity of natural fibers is making things come full circle,” says Steve Sullivan, who is currently launching a new apparel brand called Stio. “The sophistication of knits, textures, fiber combinations, that’s all happening now.”

Sullivan, who founded Cloudveil, sparking the softshell revolution, believes that innovation in outdoor was driven from the belief that “there’s a better way to build this s---. Now people are re-thinking what we already have in terms of fibers and maybe it’s more about “the next great way to put a jacket together.”

Stan Mavis agrees that it is no longer about naturals versus synthetics or one product being the “be all, end all.” Mavis, who has led textile development at several major brands, says, “I see this as a phase of holistically bringing it all together. Looking at the body as a whole and determining which products do what best. You need to ask what inherent properties does this fiber bring and what makes the most sense.”

Others maintain that the lag in technical innovation is also because fabrics and products are now so advanced. “The problems of how to stay dry and how to stay warm have been solved,” says Thomsen. “Climbers now can do a 24-hour round trip up and down Everest, so the quest is super-light fabrics without sacrificing safety,” states Thomsen.

“In today’s world it is harder to be innovative. There are now smaller problems to be solved.”

### The Eco-Influence

The question now becomes, “What adds performance?” According to Galbraith, “We have come to a place of performance and aesthetic and the next phase is looking at sustainability and impacts.” He mentions for example, regulations, legislation, labeling, global transparency and consumer awareness all coming into play. “This has a very real impact on the ability to innovate.”

Consumer demand will have a huge influence. Galbraith likens what’s happening with textiles to the grocery business 10-15 years ago when organics were considered fringe. “Sustainability has gone from trend to core of design,” he says.

Parkes agrees. “Where there is innovation is in how the industry is addressing environmental responsibility. The attention to bluesign certification, interest in waterless dyeing — these are breakthroughs in innovation,” states Parkes. “The challenge is, will the industry pay the premium for these developments? Will the consumer? Price pressure is a factor and can be a detriment to innovation.”

One company full-on investing in sustainability is Unifi. And similar to the development process in virgin synthetics,

the motivating factor in recycling is to build something better. The prevailing attitude again being let’s create something that fits our current needs.

“The original intent was for better use of our internal waste,” explains Mark McNeill, who worked on the technical side helping to get the company’s new Recycle Center built, and now works on the product side, too. “It was difficult because no one was doing it to level we were after; our type of application required a higher quality standard,” says McNeill, now product development manager for Unifi. “In the early going we tried to modify existing processes available. But we couldn’t achieve what we wanted. We knew that if we wanted to grow and diversify and expand we had to do this ourselves.”

The team next put a focus on consistency. “We drastically improved color to meet the standards in markets where color is important.”

McNeill makes the point that in order to continue to evolve both in terms of product and as a company it means looking beyond textiles and broadening a research base. He says that Unifi’s R&D department consists of a much wider range of individuals than compared to three to five years ago.

Brands are also taking this approach with in-house development. “We have to remain open to other industries,” says Frank Kvietok, director of advanced development at American Recreation Products, “You keep your eyes wide open to what is happening in adjacent industries. But also try to keep ahead of the curve in development in own arena.”

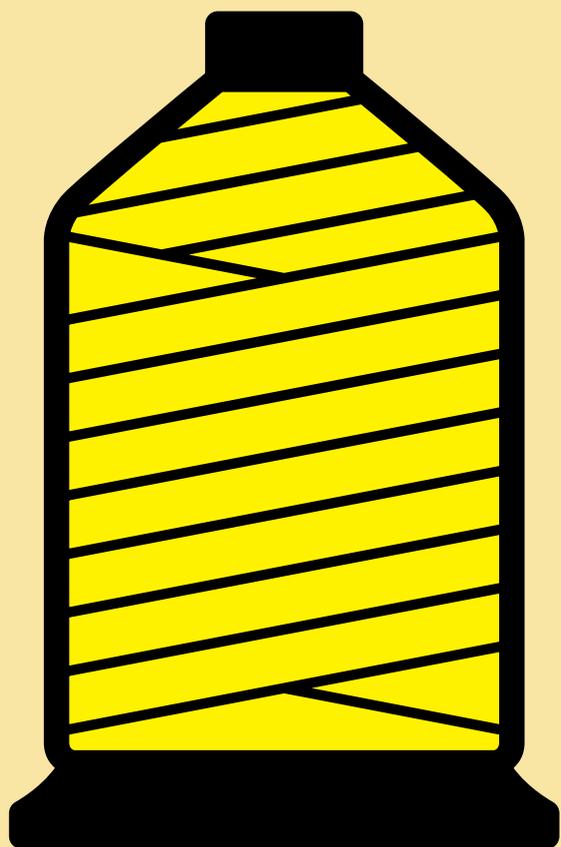
Patagonia has a group dedicated to off-calendar development called the Forge. “We work on projects that don’t necessarily have to meet any particular deadline,” explains Harward. “Some of our projects may not come to fruition for four to five years, some longer, but it also means the group is in place to work on extremely short timeframe developments.” The group works on all aspects of development – technologies as well as construction techniques – as well as academic research and with research institutes.

The role of field testing as a development tool is also under review. Kvietok suggests that wear testing be supplemented by looking at tech from a scientific point of view.

“Most of the time, chances are wear testing will prove the product is fine. And some of the time, wear testing is going to spot huge steps forward. But it is not going to provide direction,” says Kvietok, a PhD chemist, with a packaged goods background. Kvietok deals with a portfolio of brands at American Rec from entry level to elite product lines, including Kelty, Sierra Designs, Slumberjack, Isis, Royal Robbins, and Wenzel.

Most recently Kvietok was responsible for bringing to market DryDown, the technical waterproof down introduced by Sierra Designs

## COCONA TESTS THE FUTURE



Many believe the future will be in yarns like Cocona. Gregory Haggquist, PhD, is the founder of Cocona and he understands comfort in apparel is primarily related to moisture and humidity. He is currently developing new test methods that are being looked at by AATCC and ASTM. “The consumer drives everything, but it is a give and take between innovator and consumer,” says Haggquist. “The industry has been telling consumers, ‘you want this,’ but what is breathability? We didn’t know how to do the measurements. It was all about ‘my stuff has bigger numbers than your stuff.’ But consumers are confused by 10,000 of something versus 20,000.” And traditional wear testing has limitations. “It is baby steps,” says Haggquist. His new test methods look to solve this dilemma, and focus specifically on Drying Rate of Fabrics via an Air Flow Method and Heated Plate Method. The tests will understand and mimic the natural system and ultimately identify clothing that works with the body immediately. “It will take the guess work out of the design, so when the product is wear-tested users will put it on and say ‘yes!’”

# 43 countries in only 4 days

## SOURCING at MAGIC

**AUGUST 20 – 23, 2012**

LAS VEGAS CONVENTION CENTER

**REGISTER NOW** [MAGICONLINE.COM](http://MAGICONLINE.COM)

North America's largest sourcing event, showcasing  
over 1000 fabric, design and manufacturing resources

40 seminars, 70 executive speakers and topics including  
trend forecasting, new technology, ecommerce, social  
media and the latest on branding, marketing and selling

### SPOTLIGHT MADE IN THE U.S.A.

MAGIC and the U.S. Department of Commerce present Made in the U.S.A. as part of the America's Pavilion featuring apparel and production manufacturers, textile mills, trim makers, and print design services. Learn more about benefits and opportunities for sourcing in the U.S. at our complimentary seminar series.

### FEATURED SEMINAR CLOSER TO HOME: SOURCING IN THE AMERICAS

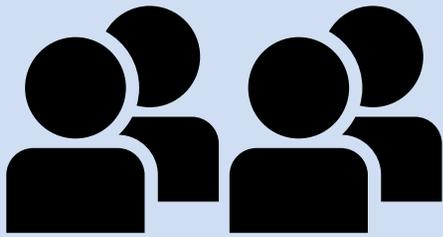
Essential insights for apparel and footwear sourcing executives, including the advantages of pairing U.S. production with Central and South American materials, world-class operational examples and accessing duty-free trade benefits via CAFTA, NAFTA and free trade agreements with Colombia, Peru and Chile.

**MAGIC**

LAS VEGAS & MANDALAY BAY CONVENTION CENTERS

FOR MORE INFORMATION CALL (877) 954-4004

PROJECT slate STREET MENS/WEAR FOOTWEARSHOW SOURCING at MAGIC WWW.MAGIC.COM #2 PLATFORM



## THE WHO'S WHO

**Carol Gee:** Worked in marketing communications in the early days of the textile explosion at DuPont. She “discovered” Will Steiger and pushed DuPont to support him, as well as John Roskelley, on many Everest climbs featuring DuPont products.

**Robert Van Dyke:** Instrumental in sales and marketing within the DuPont fiberfill division that brought to market a roster of brands such as Thermolite, Thermoloft and Quallofil.

**Greg Thomsen:** An industry veteran having founded Wilderness Experience in 1973 and serving in top-level positions with Nike, Mountaintop and American Sports Group, among others.

**Mark Galbraith:** Often referred to as a “textile guru” for his influential work at Patagonia and Nau.

**David Parkes:** A skilled marketer and textile expert who was part of the original marketing team that created what is now Polartec fleece.

**Randy Harward:** Well respected for his materials developments during his more than 20 years with Patagonia.

**Stephen Sullivan:** Credited with introducing softshell technology to the outdoor market with the Cloudveil brand.

**Stan Mavis:** A textile maverick, especially in the activewear and running apparel sectors, leading such brands as Hind, Frank Shorter, Pearl Izumi, Brooks and Sugoi.

**Mark McNeil:** A key player in the development of both the building of the Unifi Recycling Center and the development of Repreve recycled fiber.

**Frank Kvietok:** Fairly new to the outdoor industry, but already credited for bringing DryDown waterproof insulation to market with Sierra Designs.

**Seth Casden:** Leading the charge with a new category of textiles with Celliant.

**Steve Shuster:** A executive with W.L. Gore since the very beginning of Gore-Tex.

**Gregory Haggquist:** Founder of Cocona and introducing new test methods to the industry.

**Amber Brookman:** A key player in the performance nylon category in both the consumer outdoor market and military development.

last season. “We must look at innovation through the lens of is it valuable and does it help you (consumer) understand that value,” Kvietok explains. “Every Boy Scout manual advises: don’t bring a down sleeping bag into a moist environment. So the basic premise is a no-brainer — take away the negative from the best natural insulator out there.”

### So Where To Next?

“I look at it that we are entered into a new phase,” says Seth Casden, CEO at Celliant. “Yes, there are mundane advances. But fabric is no longer about how it looks or how it feels, but it is about what it is doing — fabric as an energy source.”

Casden knows well that innovation takes time. Celliant has taken about 10 years to get to this point in development. “It was like telling people the earth was round, that a fabric can increase circulation,” says Casden. “It takes time to validate (the technology) and make believers out of skeptics. There is also a high burden of proof in the U.S. But now we are at a tipping point. There are competitors coming into the market, and we are seeing good growth on the international basis — particularly in the bedding business with partners around the world. We are slowly climbing the mountain and getting to the point of validation among our peers and our customers.”

Casden sees potential in harnessing electricity through textiles via temperature. “No plugs, no wires in the garment, but beyond that. This technology is happening (in other markets) why not apparel.”

Others see wearable tech on the horizon, too, but how it plays out remains debatable. “I think the outdoor consumer will be skeptical because they won’t want to sacrifice in terms of durability and weight,” says Kvietok. “The design criteria for a technical outerwear garment limits the initial acceptance of wearable tech. The ultra-light movement makes wearable tech more difficult. In addition, the outdoor crowd focuses on self-reliance, simplicity, minimalism — the compass versus the GPS.”

Kvietok sees wearable tech more as an everyday type application, more likely happening with iPod sleeves in jackets etc., for everyday wear, for example.

“It is hard to ignore all the tech in the world and not want to look at the possibilities for textiles,” says Harward. “When there is a huge value-added — more performance for less, for example, like moisture management, like waterproof/breathable, like lightweight warmth — then it will take hold. It’s not defining only a need, but a significant one.”

According to Harward, bio-tech is where it’s at as the industry looks to the future. “If you look at what universities are pumping money into, it’s bio-tech materials.”

Temperature regulation, along with wearable tech, is a theme going forward, too. But developers caution against “pseudo tech” type

gimmicks to get the job done. It’s not about batteries, or wires, but finding a true fiber that can regulate, they say.

“Temperature regulation is the priority because it crosses all different markets,” says Kvietok. “From recreational, to high end, everyone is concerned with temperature.”

How to maintain equilibrium is key, according to Mavis. “To me this is an exciting era if put on the evolutionary chart. The last few years have been an “exploratory phase,” with folks at Hohenstein working on comfort mapping and the cooling technology out of Japan. Now better product solutions are offer responsible water and chemical use.”

He says what has broken through in the past is when the product offers a combination of function, value and overall look, and the



## FIBERS YOU CAN COUNT ON

**Cotton**  
**Wools**  
**Polyester**  
**Rayons**  
**Spandex**  
**Polypropylene**  
**Silk**  
**Acrylic**  
**Specialty Fibers (Kevlar)**

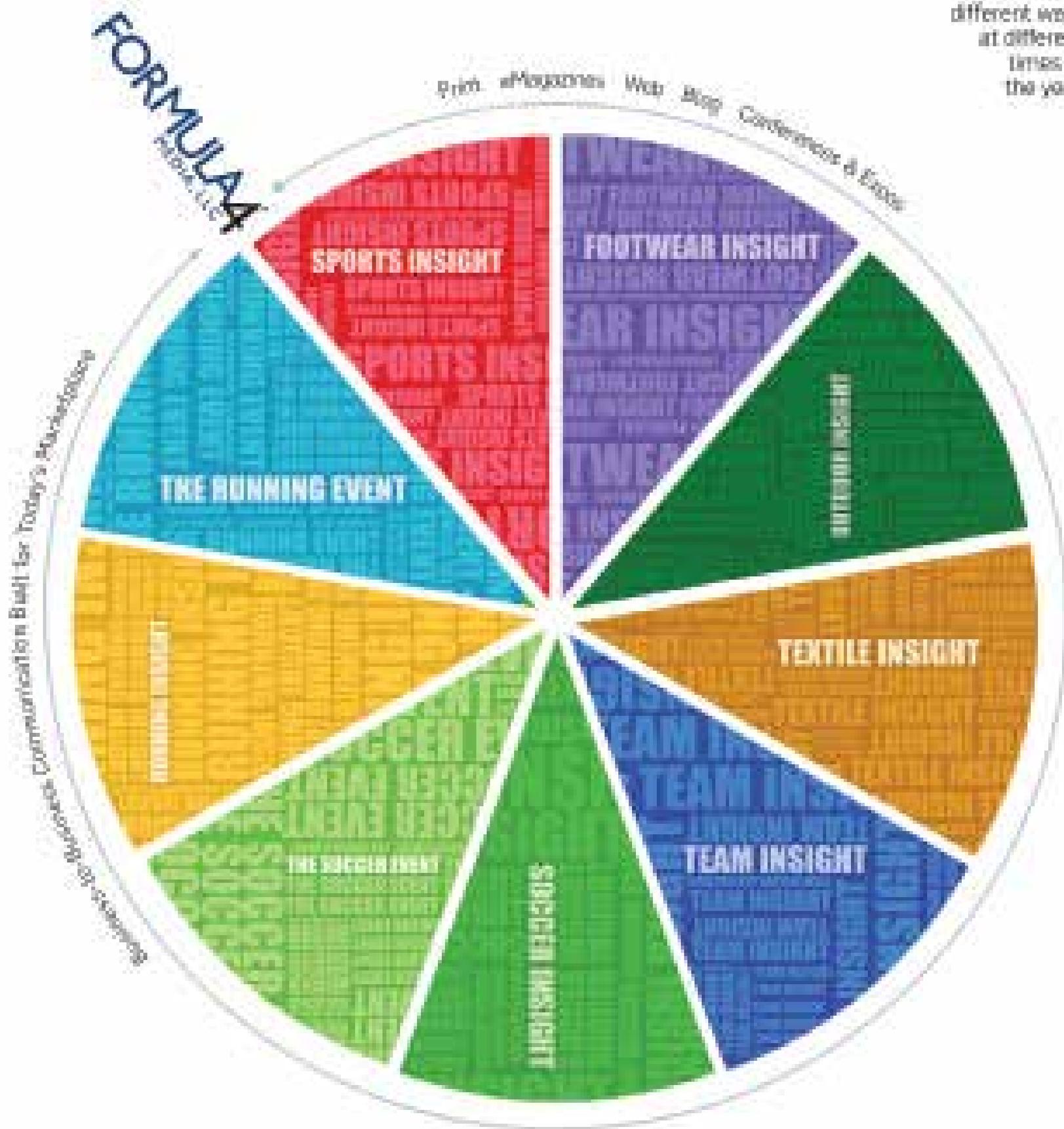
same will be true with emerging categories. “I remember when we first introduced Hind running tights,” says Mavis. “We begged people to wear them. But they resisted initially because they didn’t want to look like Robin Hood.”

Quickly, however, consumers were buying and wearing running tights in droves because the product worked. That was the key to innovation 30 years ago, and remains true today.

Galbraith says, “The big challenge is how substantive the performance is. Consumers will want it because it is better.”

So are we at the end of an era or entering a new phase? “Probably both,” says Galbraith. “We had big breakthroughs, but we’re not at the end.” ●

Market segments need useful information delivered in different ways at different times of the year.



Your niche is our niche.

[formula4media.com](http://formula4media.com) 515-305-4710

## STRATEGIES

Whether For Work or Fun, Execs Share Scoop on Some of the Apps They Simply Can't Live Without **By Suzanne Blecher**

# APPSOLUTELY ESSENTIAL

For trend spotters like Stylesight's Samantha Fox, work life and social life often intersect, as you just never know when the next up-and-coming trend will present itself. "My work involves a lot of research, from imagery to analyzing cultural trends and social behaviors," she says, so Fox is never without her phone, which is loaded with apps. Seeing that smartphone technology has made the day-to-day life of many, including Trendabl's Jon Alagem, "much easier and more fun," we've decided to ask the fashion and textile industry's most tech-savvy execs to offer up some insight on their favorite finds.

**Samantha Fox,**  
Assistant Editor Lifestyle  
& Culture, Stylesight

Always on the lookout for inspiration, Fox relies on apps with photo-taking capabilities. For capturing unique street style, Fox uses Photosynth, which allows users to take panoramic, 360 degree photos to share with friends through search engine Bing. Meanwhile, Cinegram animates small portions of photos to create images that are part-photo and part-video, which Fox uploads to social networks. "It gives you an avenue to be really creative with imagery," she said. Another camera app for iPhone 3GS, 4 and 4S, Sekai Camera, "adds an augmented reality layer to real-world locations." With the tool, users can post pictures and texts on-the-spot, which are then visible to other visitors at the same locale.

When on the road searching for inspiration in unfamiliar cities, Fox turns to Stylesight's Style Traveler to find museums and galleries for research purposes.

**Paul Cavazos,**  
VP of Stuff,  
Olah Inc.

As a resource for all things denim, Cavazos recently helped develop Olah's Denim Survival Guide. The app is an educational and professional reference tool with an entire history of indigo by educator Dr. Jenny Balfour-Paul and history of denim by Levi's archivist and historian Lynn Downey, as well as a denim dictionary or terms.

To "keep inspiration close and connect with friendlies and people I respect," Cavazos uses photo-sharing app Instagram, which helps turn photos into works of art with filtered effects and borders. Photos can be shared instantly via Facebook, Twitter, Flickr, Tumblr, Foursquare and Posterous. When he needs a breather from the daily grind, Cavazos turns to Concert Vault, providing access to the world's largest collection of live concert recordings for iPhone, iPod Touch and iPad.

**Jon Alagem,**  
Founder, Trendabl

Launched in March, Trendabl is a social network tailored specifically for fashion with a platform for brands to "show their new products, runway looks or inspiration to fans in real-time," according to Alagem, founder of the app. Designers (such as users Mary-Kate Olsen and Michael Kors) can log in to the app multiple times a day for inspiration, with the ability to search the photo-sharing database for specific trends, say for example, blue shoes. One shoe brand recently designed a pair of shoes specifically from inspiration garnered via the app, said Alagem. Images posted can be tagged with information including brand name, retailer, color and price. Repost is a feature in the app that allows users to share anyone's posts with their own followers and friends.

In his downtime, Alagem enjoys Spotify for music, car service dispatch app Uber and live television feed Slingbox, so he "never misses a Lakers game."

**Megan Ray,**  
Designer, prAna

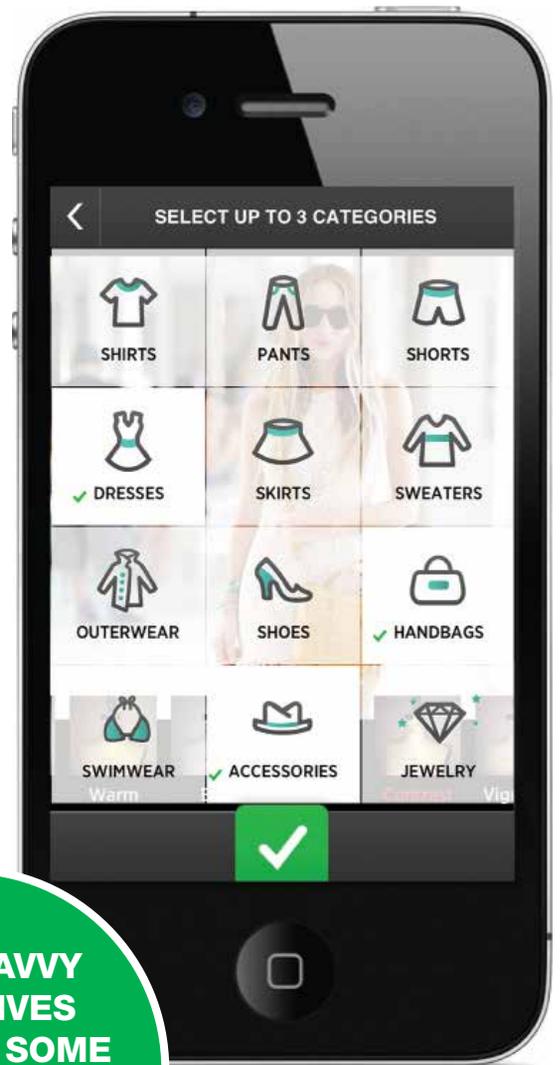
As part of the design team at climbing and yoga-inspired brand prAna, Ray finds information-sharing apps especially helpful during the workday. She especially likes virtual notepad Evernote, a platform to save ideas such as things you like, hear and see. The app is also searchable by keyword, so inspiration doesn't get lost in the shuffle. For sharing product images and information, Dropbox allows users to download large files, perfect for swapping product images easily without clogging up a co-worker's email inbox.

In Ray's work travels, she depends on apps for cheap gas prices, international text messaging, and video chatting with friends. When there's a little downtime for play, she turns to Surf Report to check wave height, swell direction and tide.

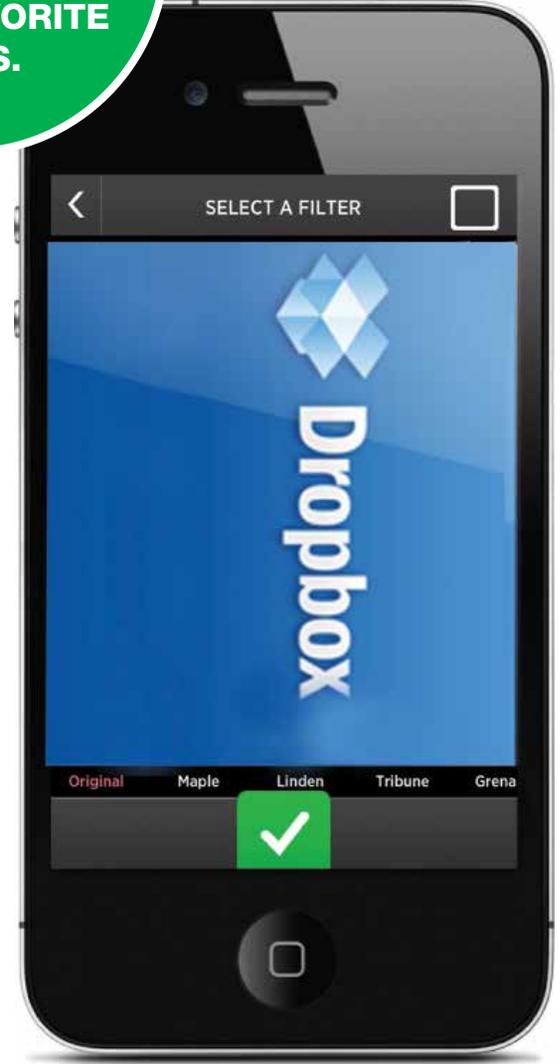
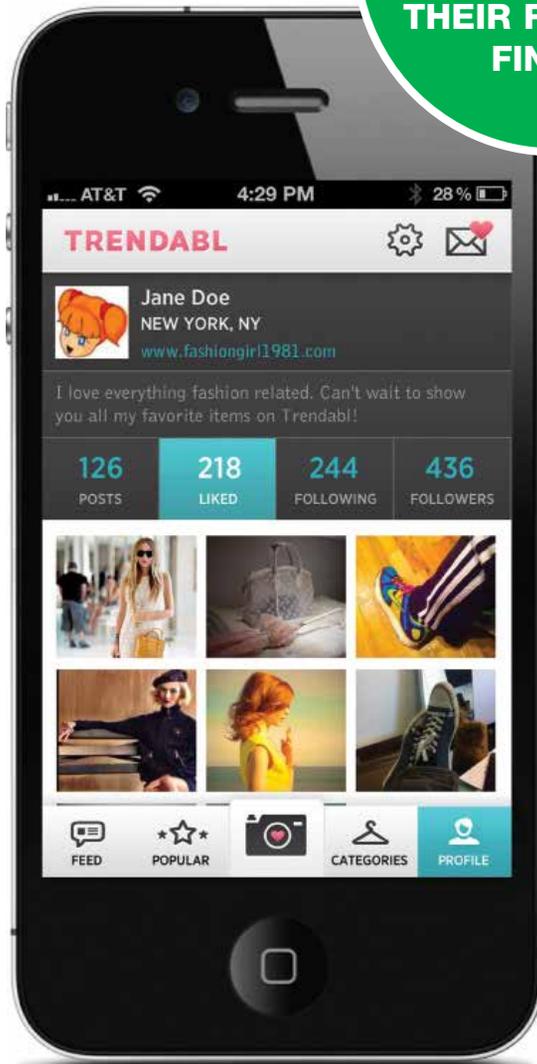
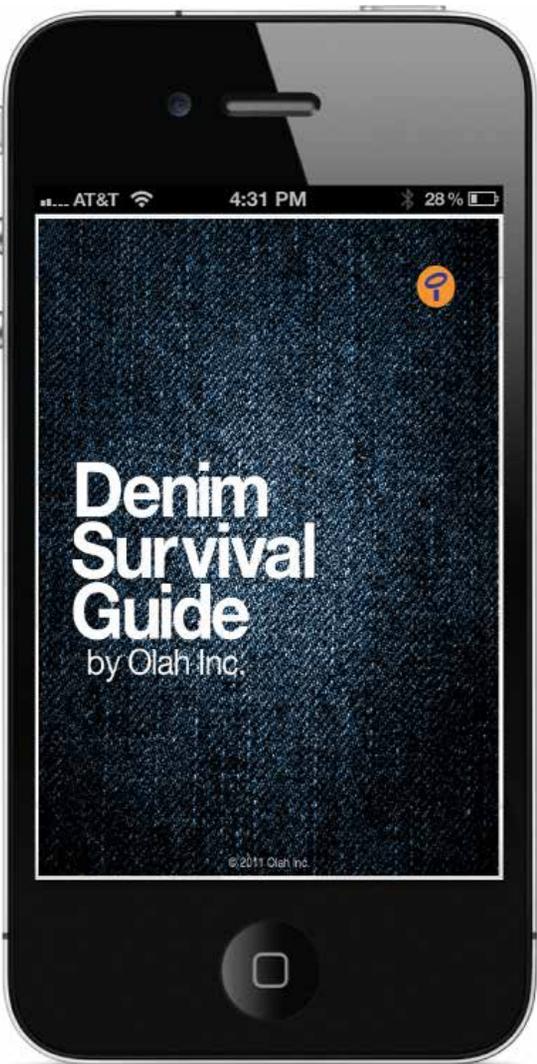
**Tricia Carey,**  
Merchandising  
Manager, Lenzing

While Carey is a self-proclaimed "BlackBerry person" with limited space for apps, her favorite is the Weather Channel app, which is helpful in packing for frequent work trips to Lenzing's home base in Austria. The app includes a GPS-based location tracker, interactive radar maps, current weather and a 10-day forecast.

Since Carey is often dealing with differing measurement systems, the exec said she'd love an app for conversions. Smart Converter is one app available for BlackBerry allowing users to convert between different measurement units in area, length, volume, weight, temperature, angle, speed, power, density and even currency exchange. ●



**TECH-SAVVY EXECUTIVES OFFER UP SOME INSIGHT ON THEIR FAVORITE FINDS.**



## SUPPLY CHAIN

Verticality, free trade agreements and other efficiencies along the way are critical to controlling costs **By Karla Magruder**

# PIPELINE PRICE

Anybody working in the textile industry knows that price pressure is huge right now. It's probably the most important issue for brands in our post-recession supply chain. A variety of issues are at the root of the problem. For example, the costs of raw materials are moving — although not always upwards. Labor, energy and transportation prices are increasing. In addition, brand and retailers are demanding larger margins. Here's a look at what supply chain factors affect prices, how margins are shared throughout the supply chain, and what if anything can be done to get prices that meet the requirements of brands and retailers while providing consumer value.

**Cotton Prices: Downward Pressure on Price is Expected**



**C**otton Incorporated Cotton Forum 2012 last month highlighted many of today's price issues. The event was designed to introduce U.S. brands and retailers to Western Hemisphere suppliers – from yarn to finished garments – and encourage business development. Presentations delivered compelling information on why it makes sense to do business in this hemisphere when it comes to price and flexibility.

The keynote speaker outlined mega-trends such as free trade agreements and the development of integrated supply chains, including full package suppliers and supply chain cities where yarn formation, fabric formation and garment manufacturing grew up together. He went on to explain that the implementation of free trade agreement has coincided with these developments and overall growth of business in the Central America region? For brand and retailers this evolution has meant the ability to source garments in the western hemisphere at lower cost than is possible out of China for specific garment types. Getting a glimpse of the factors effecting the supply chain in Central America starts to highlight the complexity of issues when figuring out a global supply chain for developing the best products at the best prices.

### Raw Materials

Cotton prices, just recently at record highs, are now declining to record lows. According to Cotton Incorporated economist Jon Devine, "For the next 12 months cotton will be plentiful." He went on to say, that we are at "the highest stock to use ratio ever." The price, which has fallen 25-30 percent since early April, is a reflection of supply and demand, downward pressure on price is expected to also continue for the next year.

It's human nature, when hearing about lower prices to expect these

prices immediately. In actuality the prices we hear about in the market are the prices that are offered; we may not hear about prices that are actually paid. There is also a lag time for the lower-priced cotton to make it into the supply chain.

**The bulk of the costs at a fabric mill are in the yarns and in dyeing and finishing.**

**MENACHEM KATZ  
CYBERKNIT**

According to Devine, "the average price of cotton is still 50 percent more than the low prices we are hearing about now due to this lag time."

Polyester has also been trending downward in price based on what is happening with demand and petroleum prices. However, recycled polyester doesn't necessarily follow the same price curve. Jim Ciccone, Unifi brand sales manager, explains that "we try to keep recycled within a delta of 10-15 percent of virgin polyester prices. This isn't always easy since recycled prices really don't correspond to virgin. Their raw material is bottles or bottle chip."

### Spinner, Weaving and Knitting

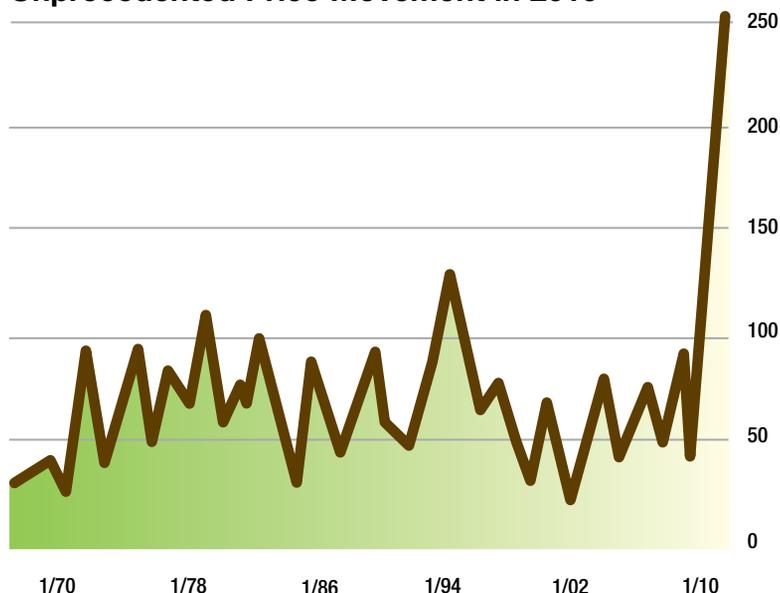
Buyers still have the expectation that recycled is cheaper. The reality is you have to look at the cost of collecting bottles, cleaning and purity that effects the ultimate price in addition to demand for the cleaned chip.

There is a whole host of things to look at when it comes to spinning. For example, is the spinning equipment modern? Is it efficient? What are the energy costs in the spinning location? If you look at multiple yarn suppliers each will have their own prices. When cotton prices where high spinners could decide what yarns they were willing to spin. Finer counts made sense since they would use less fiber overall and could charge more money. Coarser counts on the other hand

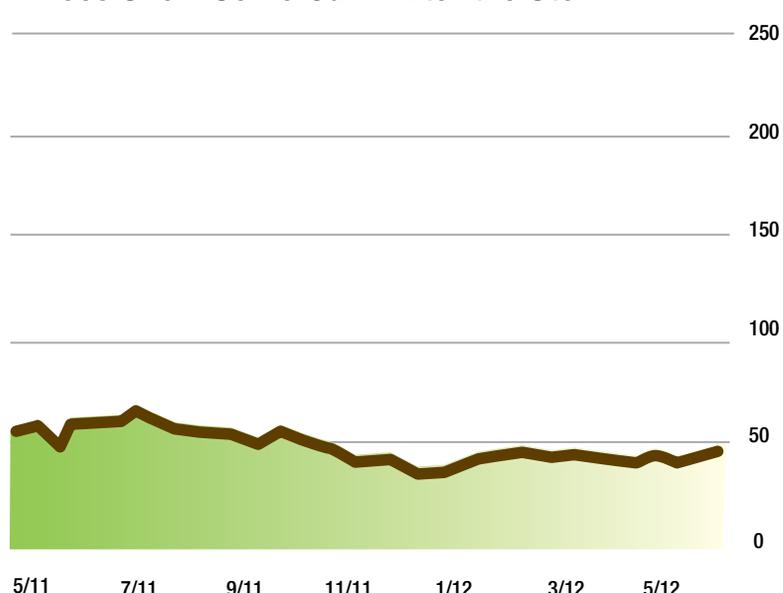
# PRESSURE



### Unprecedented Price Movement in 2010



### Prices Show Some Calm After the Storm



Source: Cotton Cotlook

would consume more fiber and had to be sold for less.

At weaving and knitting mills the goal is to create a product that meets customer specifications. According to Menachem Katz, Cyberknit, president, “The bulk of the cost at a fabric mill are in the yarns and

**The average price of cotton is still 50 percent more than the prices we are hearing about.**

**JON DEVINE  
COTTON INCORPORATED**

in dyeing and finishing. Working loss is an area you have to pay close attention to — on knitted fabrics expect a working loss of one to three percent and six to 10 percent in dyeing and finishing.”

The best opportunity to control cost is with yarn since it’s the most expensive and most important element. Another way to get better pricing is by how you place your orders. If you run 20,000 yards over the course of the season but you order it in 2000-yard increments your pricing will be higher than in one order. The mill’s ability to run product continuously saves time and money in working loss and time in making machine changes, which they can pass along. Yet another way is to place orders during traditionally slow times. In the end fabric mills are working on anywhere from 10-20 percent depending on whether it’s a converter, mill or geographic location.

#### Finished Goods

Turning the fabric into garments encompasses yet another set of issues. Free Trade Agreements are critical at this stage. For example a polyester fleece garment made in Asia can have a duty rate in the 30 percent range whereas if it’s made in the western hemisphere it is possible to get duty free.

Labor rates are one of the primary cost centers in a garment. They have been rising in China, which means that other parts of the world

are becoming more competitive. At the same time you have to look at efficiencies and skill levels. It may be possible to get lower labor rates in Bangladesh but if the skill level or productivity is lower than a higher labor cost country the switch may not pay off. The vendors need to make a margin, typically in the 10-15 percent range depending on garment type. High volume, simple-to-sew garments have lower margins than more complicated garments — with the pressure put on garment manufacturers to have sharp prices margins do go lower. One manufacturer I spoke with said that “it’s impossible to make money these days. We only cover the cost of keeping the plant running so we keep people employed.”

#### Retail

According to my sources, retailers are making the best margins. They can be as high as 75 percent with private label products, while branded products sell at lower margins. Brands garner just over 50 percent. Governments even take their cut in duties, which can be over 30 percent.

On the other hand, garment makers, fabric producers and raw material suppliers are working on significantly less. What does this all mean? Haysun Hahn, Founder of Fast Forward Trending, explains, “You have to look at and respect the people you are doing business with, partnerships must be real. If the entire supply chain doesn’t earn money it will not be healthy, affecting everyone’s business negatively.”

Can we provide the customer value in the combined margins above? It’s obvious that vertical supply chains that don’t require multiple profit margins, free trade agreements and other efficiencies along the way are critical to controlling costs. For the supply chain to thrive and be profitable we have to recognize that in the end the consumer makes the decision. They vote with their dollars on whether a garment is worth buying ●

## TREND SETTER

Senior Design Director Nick Cienski Drives Innovation at Under Armour **By Suzanne Blecher**



**W**ith a penchant for the parts that make things tick, Nick Cienski put his design hat on backwards two years ago to start Under Armour's Baltimore-based innovation center. Inside folks from all disciplines create and break items apart to "see what fails and make that better," he says. Now senior director of men's apparel and outdoor, mountain tactical, Cienski spends time implementing that information into the garments he creates.

### You recently incorporated heat-reflecting coldblack into your lineup. Can you tell us about it?

Coldblack is something we've been playing with for a number of years. We started by making up prototypes and handed them out. In Baltimore, it gets pretty hot and sunny, so we had people doing their lunchtime workouts or going for a run in it. The feedback kept coming back that there was something here, so it passed our initial sniff test. Then we partnered with a mill and the makers of the compound (Schoeller). Golf has really embraced it and its out on the PGA tour. Basically coldblack refracts a spectrum of rays from sunlight that typically heat you up.

### Any other technologies you're looking into?

We're playing with taking some of our existing technologies to more of a nano approach. We're taking things like antimicrobial and anti-odor components, looking at how we get odor control onto synthetics and control it to a much higher degree. So where you work out on a Monday and put your stuff into a locker or a gym bag that you put into the back of your

car for a day, how do we make sure the product isn't stinking too badly? There aren't many capture technologies out there, but we've got something that's in the works that's pretty cool and is quite proprietary.

### Are you testing it now?

We'll test it in our innovation center, but we also look for independent testing. Unfortunately it's a very long process.

### What benefits are consumers asking for from their garments?

Durability through wear and tear, like pilling and things that you don't want to happen to your garment. From a performance standpoint, there's a lot going on with compression. As new fitness regimes come through like CrossFit or P90X, the wider consumer base is plugging into the benefits of tighter-fitting product and how it benefits you through limiting muscle fatigue and muscle oscillation. From a Monday to a Tuesday, you're not as tired, so you can work out harder and achieve goals better.

I also think the whole concept of layering is something you're going

1



2



**1. Men's coldblack Outline Logo Polo:** Built to deny the sun, UA's performance golf polo uses coldblack technology to block the heat of the sun, so wearers feel cooler and more comfortable. **2. Women's Charged Cotton Storm Fleece Full Zip Hoody:** Consumers looking for a performance cotton product have that and more with lightweight, warm fleece, comfortable fit, and a water-resistant Storm finish.

to see more and more. Like people wearing a compression shirt or short underneath more of a loose garment because they're starting to realize the short term and long term benefit of that.

### How are you telling that story to consumers?

We're bringing color and print in, but its underneath. You'll see an orange compression short under a black woven training short. You're going to see more and more athletes, commercials and media around the concept of layering. Most of our golf athletes will wear compression under their polos whether its half-sleeved or full-sleeved compression shirts. You can stay more comfortable in your activity and therefore perform better over the course of the day.

### On your site you let shoppers browse by fit. Why?

We found that compression was always the athlete's fit. It's a tool, versus a garment. So we developed a fitted fit to give consumers who aren't familiar with compression an opportunity to wear something that's a more comfortable version. As you train up and realize you need more, you go to the compression fit.

### What are you working on now?

For Spring 2014, you're going to see a lot more fun, creativity and a

much fresher look. It's definitely coming from a consumer push. We travel the globe looking for new ideas and international consumers are being more provocative in their use of color and layering and having a lot more fun in their physical activities. They're taking more risks and that's starting to trickle through the U.S.

### What's next in-store from under Armour for Fall 2012?

We've revamped the entire base layer category. We strived to pull a lot of weight out of fabrics that keep you warm. Double-knits are thicker on the outside to use for layering or running and the inside captures your body heat. Base layers become hybrids where we put the right fabric in the right place, instead of one fabric story. We've started to play with a lot more color blocking and a lot more prints in a category that's largely for us has been pretty solid.

### Any further expansion in cotton?

The Charged Cotton line is something we keep expanding every single season. Consumers are buying it from us in droves. We're looking at new ways for cotton to dry faster and pull more weight out of the cotton we're using. We're blending a lot of cottons and polyesters together to achieve a warmth or a stretch or a durability story. Cotton is definitely not going away. ●

Outdoor Retailer  
Booth # 155-625



# CoolVisions

dyable polypropylene

## The **EcoExtraordinary™** All-Performance Fiber

- Environmentally friendly
- Cottony soft
- Lightweight and comfortable
- Moisture management
- Durable
- Breathable
- Thermally insulating
- Stain resistant

For more information, contact:  
CoolVisions, Inc., 10000 S. W. 10th Street, Suite 1000  
Miami, FL 33156, USA  
Tel: 305-440-1111  
www.cool-visions.com

[www.cool-visions.com](http://www.cool-visions.com)



## Advanced Finishing Technologies for Textiles



Sun Reflector –  
UV Protector

[www.coldblack.ch](http://www.coldblack.ch)



Save Your Energy!

[www.energygear.ch](http://www.energygear.ch)



Learning from Nature  
keeps Textiles  
dry and clean.

[www.nano-sphere.ch](http://www.nano-sphere.ch)