



# Australian Wool Innovation Merino innovations



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**Processing Technologies**

# About Australian Wool Innovation

- Australian Wool Innovation (AWI) is owned by 33,000 Australian wool growers who pay a 2% levy.
- AWI invests about \$60 million annually to drive research, development and marketing.
- AWI has two key objectives:
  - to increase demand for Merino wool
  - to improve on-farm productivity.
- AWI has 78 staff at offices in Australia (Sydney, Melbourne and Geelong), China (Shanghai), United States (New York), Hong Kong, India and Italy.

# Increasing demand for Australian Merino wool

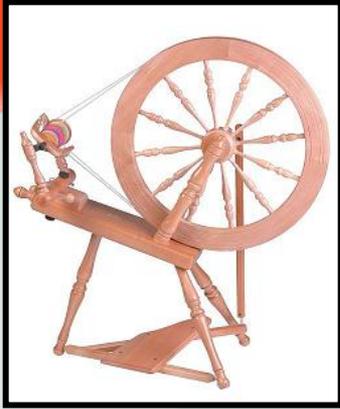
- AWI is building partnerships with designers, retailers, fabric manufacturers and garment makers (B2B) to point of sale.
- Focus is on developments, innovations and marketing that improve colour, softness, touch, handle and drape of woollen fabrics.
- Textiles 2004/5  
Total \$24 million  
Product development > \$10 million  
Both to be increased in 2005/6.



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## Past

- Ten years of static prices.
- Wool replaced at lower-middle price points.
- Processing moved to China, Turkey, North Africa.
- Design and development skills lost.
- Men's suits still strong area.
- Recovery for knitwear.

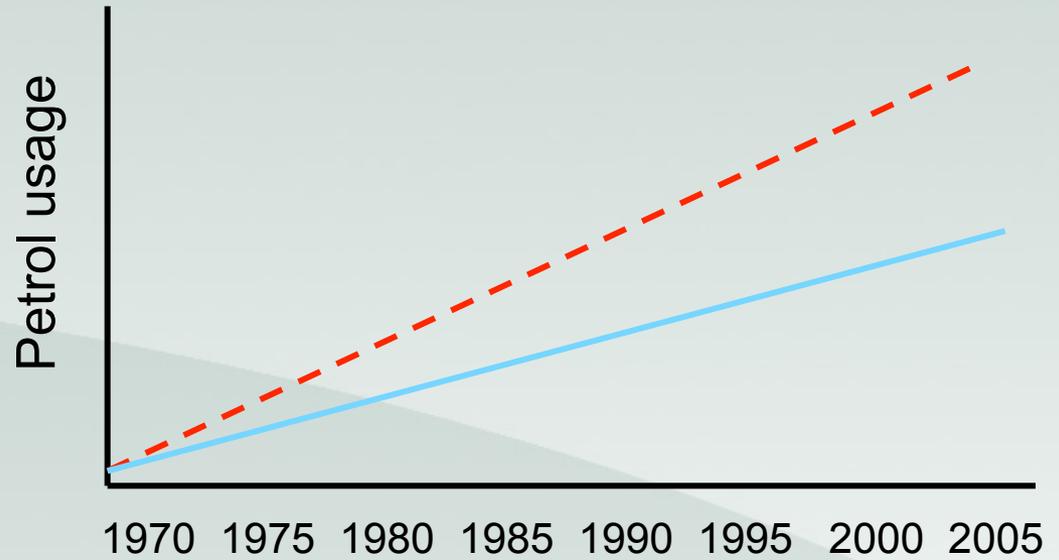
## Present trends



- Lifestyle changes in the Western world.
- Lifestyle changes in Asia/China.
- Cult of the individual.
- Target 20–35 and 45+ age groups.
- Wool being requested.
- Scope for growth in domestic markets of China and India.



# Limits to growth

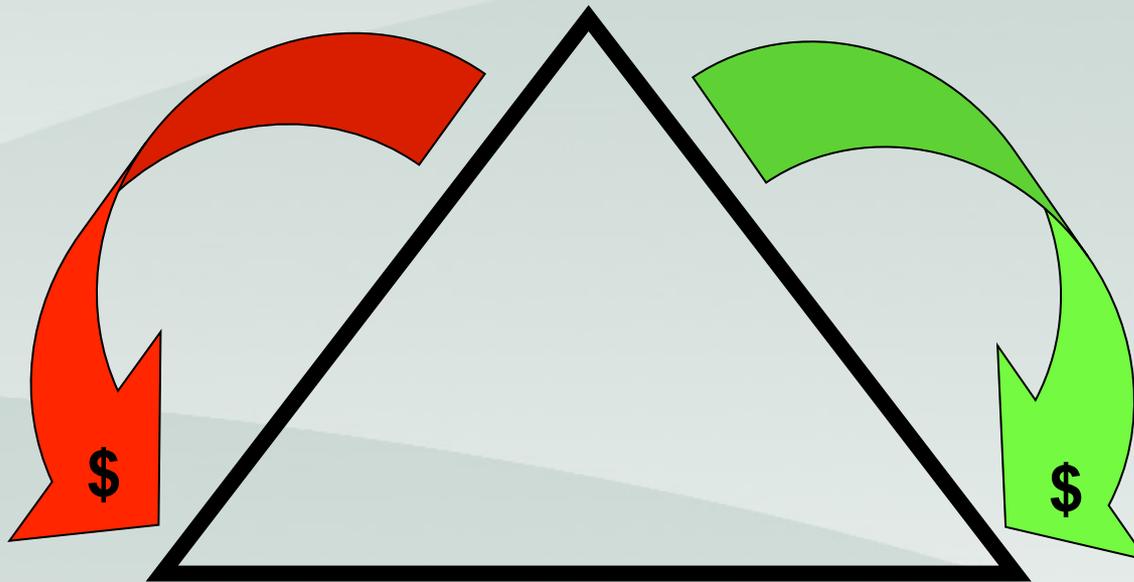


# AWI marketing strategy

- Study lifestyle trends and understand consumer preferences.
- Develop marketing stories around Merino fibre.
- Create products from marketing stories.
- Interface with producers and retailers.
- Employ design ‘names’ .
- Manage and control the detailed marketing plan.
- In short, ***consumer-led research and development.***

# Tripartite methodology of commercialisation

Funding partner (AWI)



Science partner



Supported by the  
appropriate  
science

Brand partner



GLOWEAVE



POLO.COM  
RALPH LAUREN

KOOKAI

## Why we focus on brand partners

- ***To test the value of the project*** – AWI aims to invest in projects that can be commercialised.
- ***To take guidance*** – the development must be sympathetic to advice and direction from the brand partner.
- ***To hit price point*** – AWI aims to develop products that have a price point the marketplace is willing to digest.

# Marketing platforms



# Winter to spring product maps

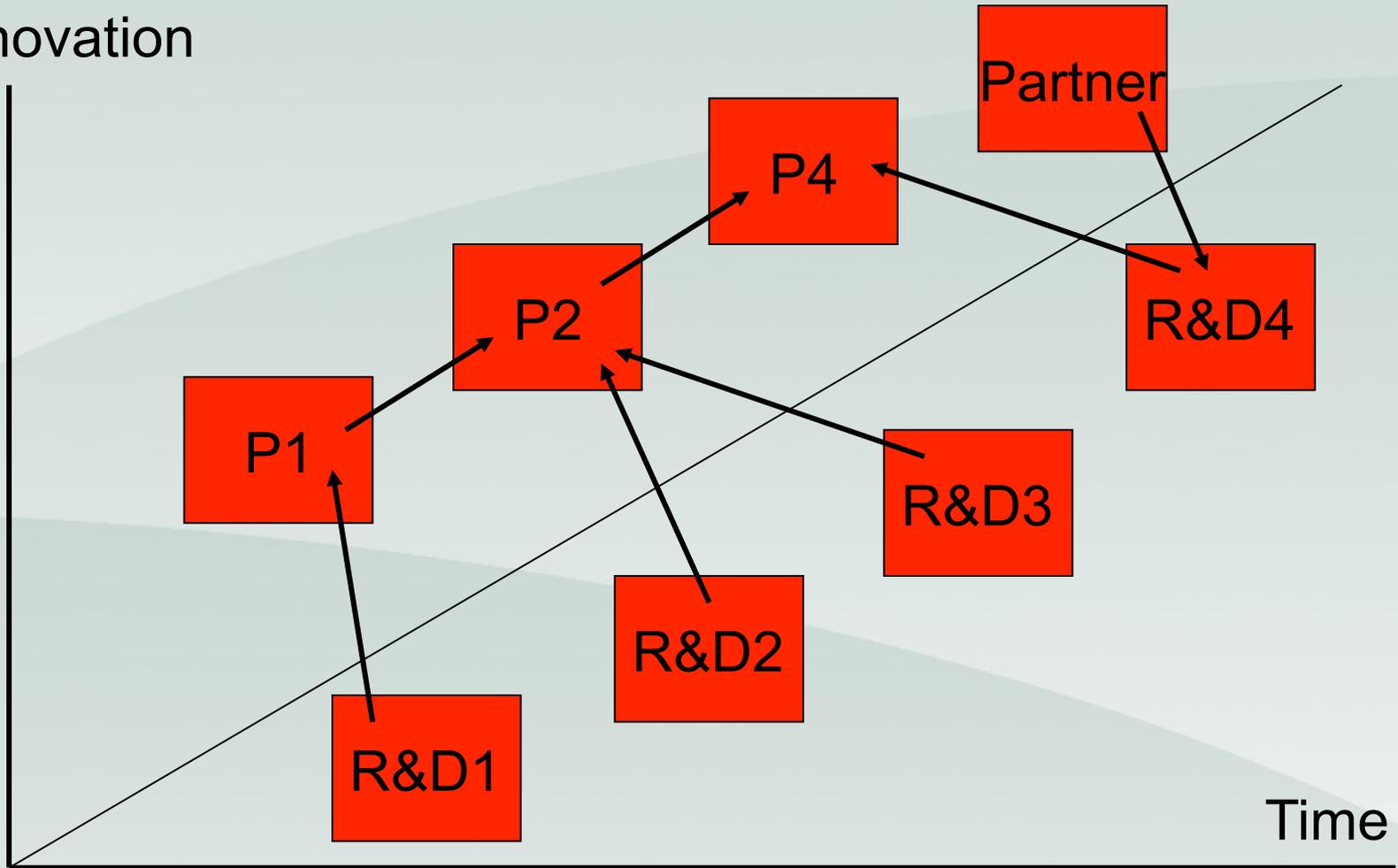


Ladies fashion market  
Merino blended with:

- linen
- silk
- arcana
- viloft
- micro fibres
- cotton.

# Product development 'roadmark'

Innovation



# Machine-washable wool suit

- Holds its shape and style after washing.
- Wool/polyester fabric.
- Heilan to sell the suits through its retail shops.
- Aiming for 30,000 suits in first year of production, 50,000 suits in second year.
- Mass production commenced in 2005.



# Structural blends

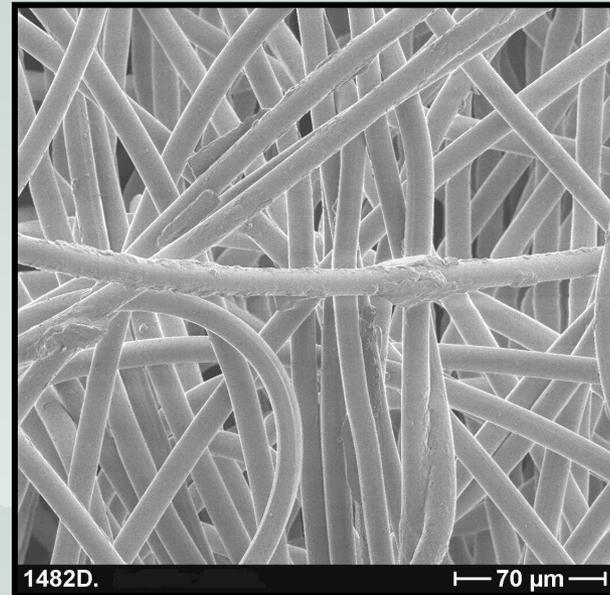
## Project: Wool/cotton blends

- Meet consumer trends towards natural fibres.
- Woven and knitted garments.
- Improve tactile and comfort.
- Retain garment appearance and washability.
- Commercial wear trials:
  - Rip Curl
  - Sportscraft
  - Yakka
  - Thomas Cook
  - Department of Defence.



# Non-apparel products

## Electrostatic wool filters



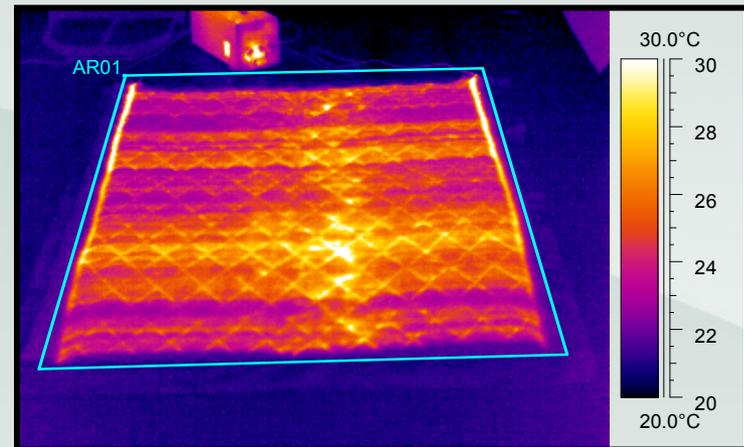
To develop new uses for wool in medical and industrial filtration products.

# Novel apparel products

## Heated socks and blankets

Wireless heating system.

- Using conductive polymer technology.
- Commercial trials about to begin with two large retailers in the UK.



# Processing efficiencies

## Murata Vortex

- Spin yarn directly from sliver rather than roving.
- Twenty times faster than conventional spinning systems.
- Lower spinning cost.
- Potential for spinning both wool and wool-blend yarns for knitwear.
- Commercial partner: Murata, Japan.



# Medical textiles

- Trauma - regenerative programs:
  - burns - trauma immediate care
  - burns - trauma recovery management
  - theatre covers.
- Palliative and aged care:
  - injury prevention - tears
  - treatment of ulcers
  - covers and garments.



# AWI and Woolmark

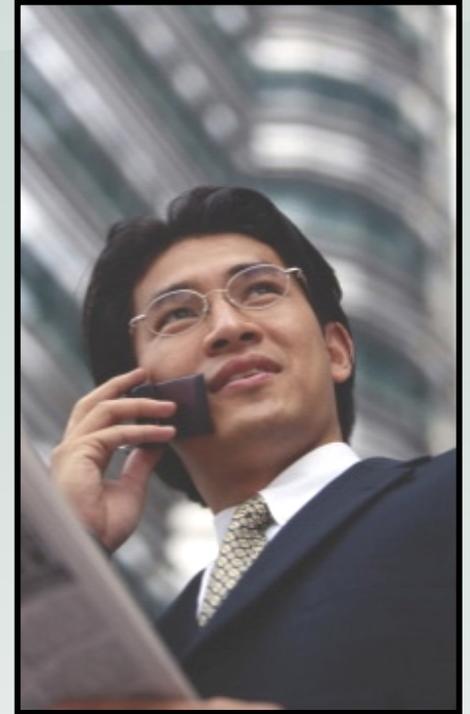
## *Merino Active*

- Fighting back against Polarfleece in \$4 billion fleece market.
- Bi-layer blend 35% wool, 65% polyester.
- Warmth and breathability benefits of wool.
- Easy care and value for money.



# Lightweight machine-washable wool fabric

- 18.5-micron pure Merino wool fabric, easy care, chemical free.
- Developed for summer wear - shirts, trousers and jackets.
- Technology transfer completed in several countries.





## Total Easy Care Knitwear, USA

- Recovering lost markets in women's outerwear.
- High demand market.
- Minimum care or TEC.
- Commercially available.



# Merino super soft wool fabric

- AWI working with KOOKAI.
- Redefining wool as soft, gentle, feminine and comfortable on the skin.
- 18.2-micron with long fibre length.



# KOOKAI – a leading fashion retailer



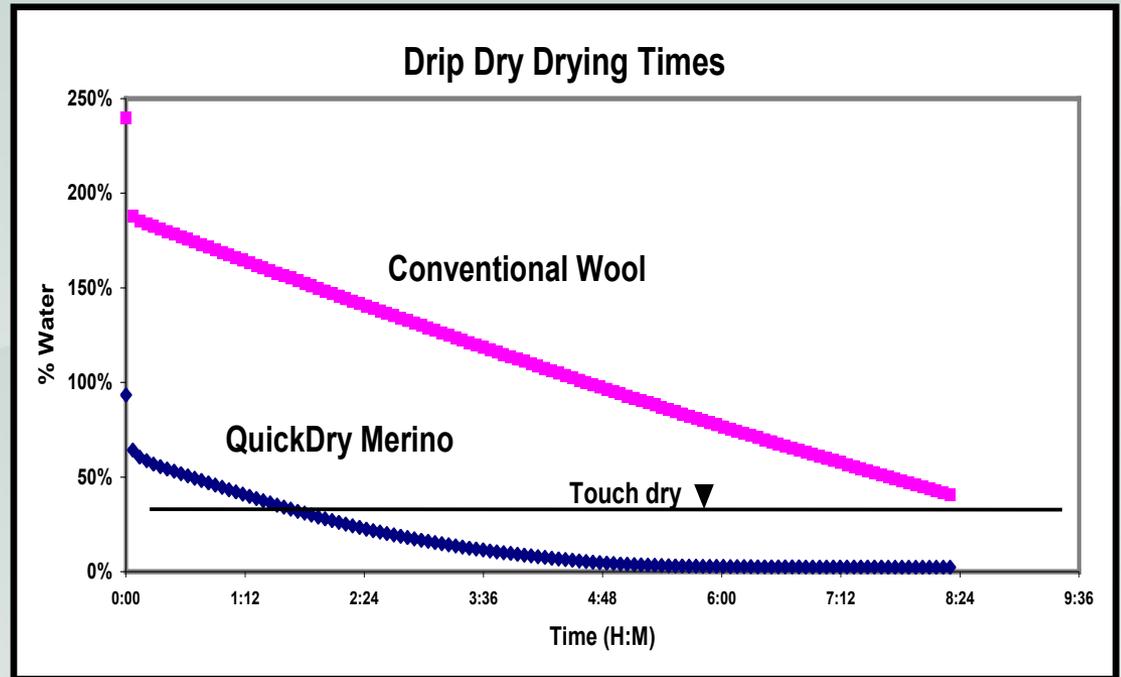
- From 1998 to 2004 cumulative wool sales have reached \$50 million.

- ‘Merino Posh’.

# Quick dry

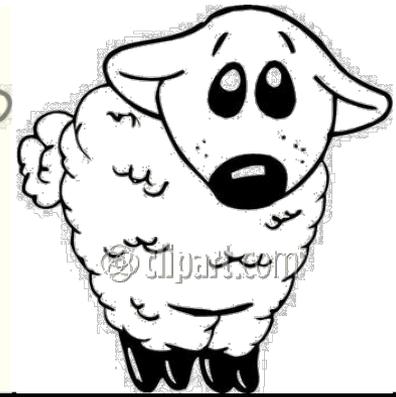
## Outcomes

Significantly reduced drying time for both shrink-resistant and hand wash wool garments.



- Holds less water after washing.
- Drip-drying time reduced by a factor of four.
- Tumble drying time reduced, saving time and energy.
- Stain release.
- Water resistant.

# Whiter wool

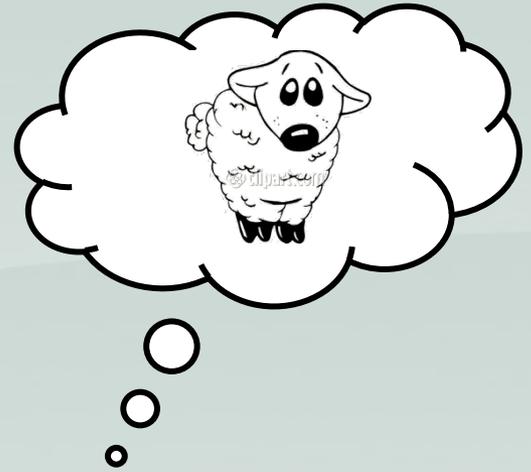


## Problem:

- naturally cream
- consumer needs – FBA Cotton
- wool needs – whiter and brighter
- bleaching damages wool
- FWA not suited to wool.



# Whiter wool - solutions



Blends: target  
FWA to non- wool.

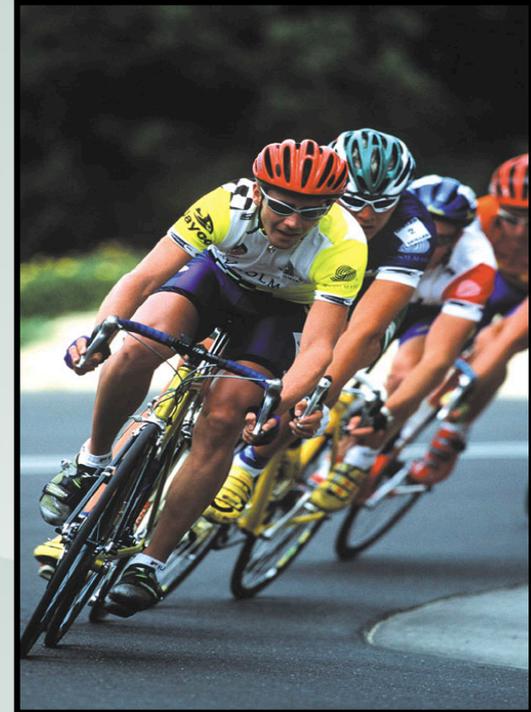
Bleach wool FWA  
synthetic =  
'superwhite'.

Pure wool – Rohm and  
Hass – best white /  
minimum damage.



# Sportswear program

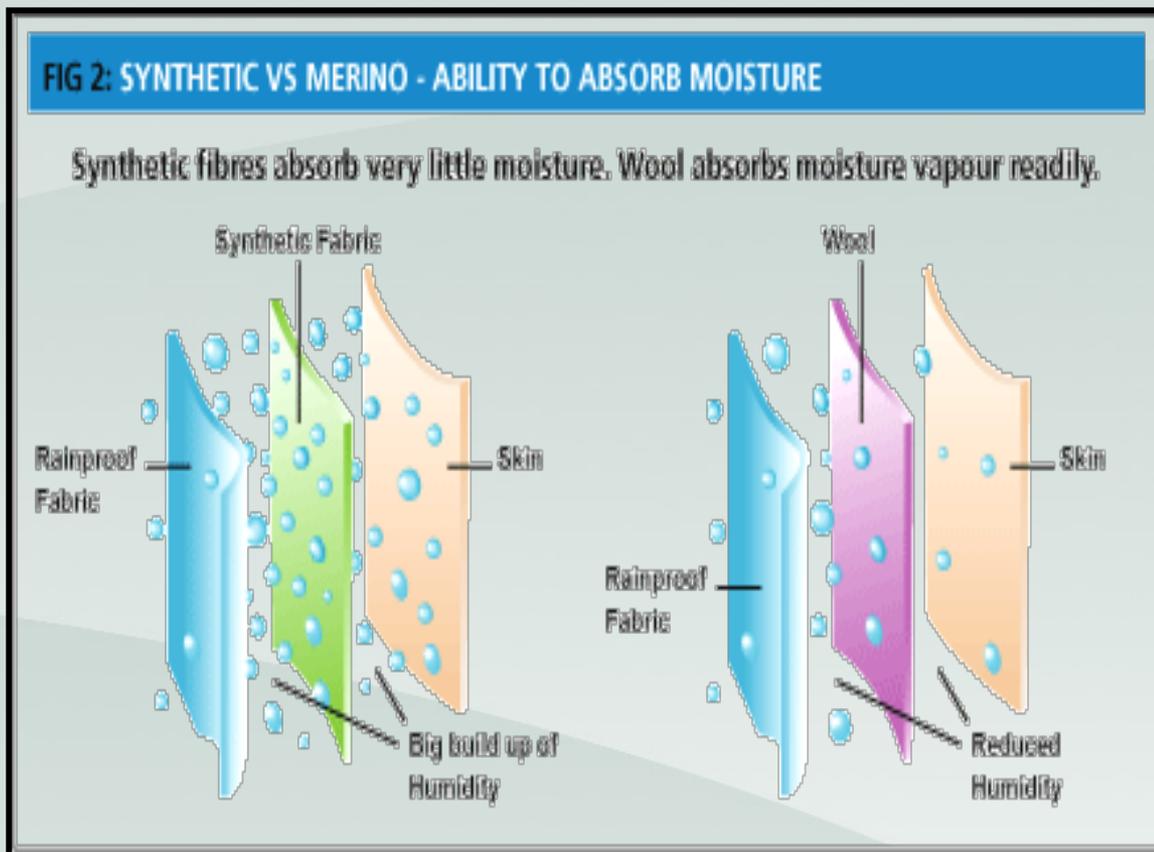
- Wool is rare in global sports apparel.
- Change:
  - technical merits of wool
  - needs credible and innovative products
  - targeted to key sports needs.



# Sportswear program

## How?

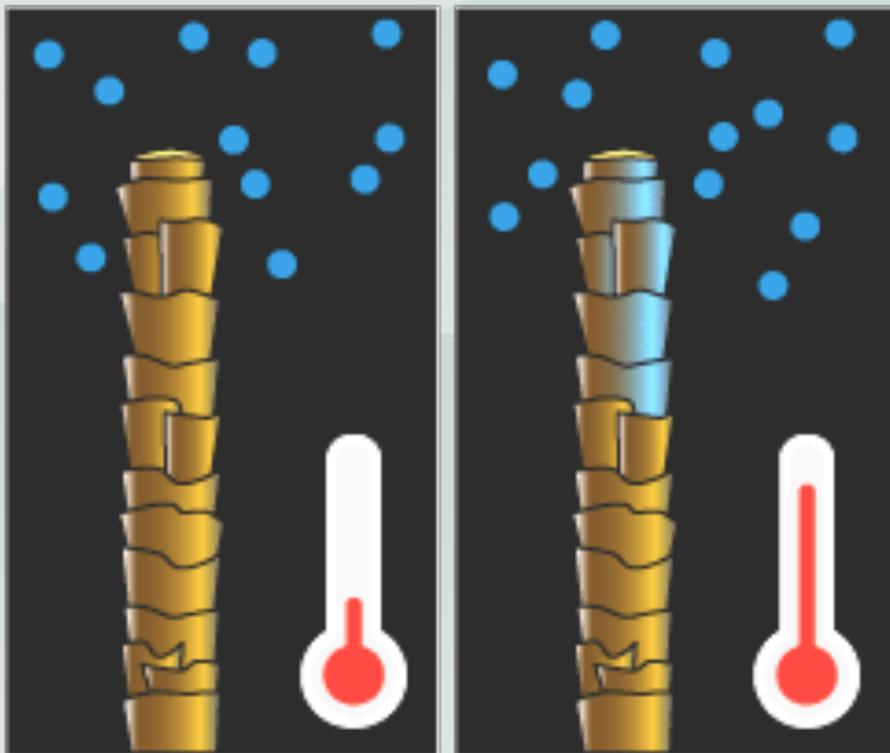
- Create performance story.
- Create brand partnerships (Nike, QS, Oakley).
- Opinion leader network.
- B2B and B2C campaign.



# Sportswear Program & Merino

**FIG 6: WHEN WOOL ABSORBS MOISTURE**

When wool absorbs moisture it produces a rise in temperature known as heat sorption.



- Moisture transport.
- Temperature reduction.
- Wearer performance.
- Wearer comfort.
- Next-to-skin softness.
- Stretch.
- Odour resistance.
- Stain resistance.
- UV protection.
- Durable.

# Sportswear Program

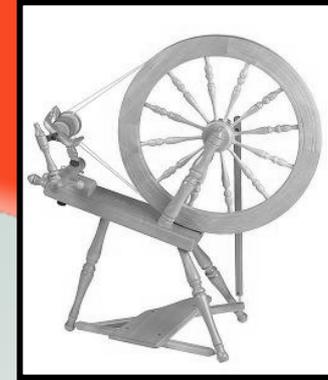


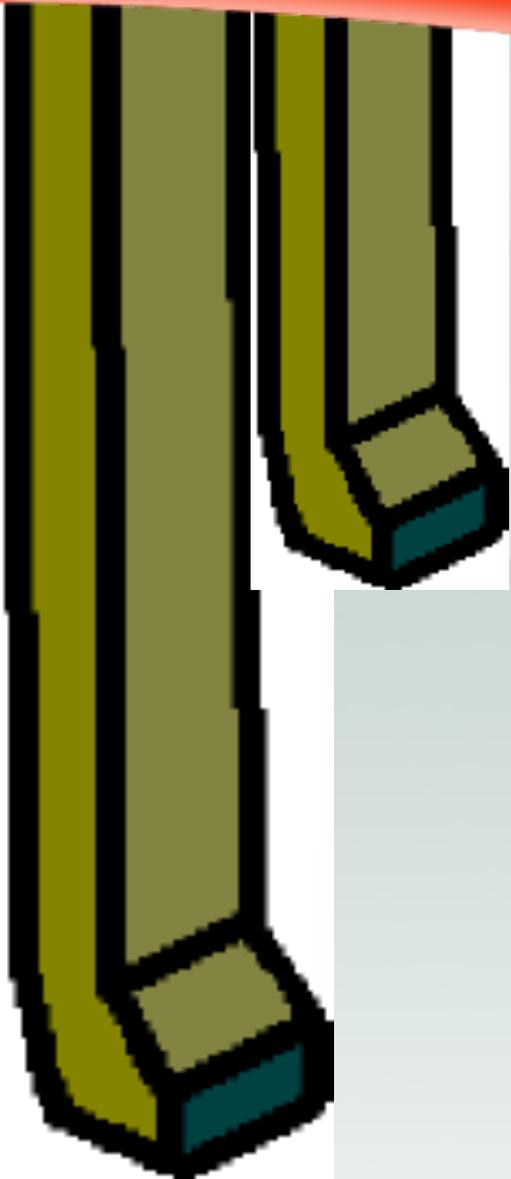
## When?

- Dec 05: Partner selection.
- Feb 06: First prototype range at ISPO.
- Sept 06: Range and supply engaged.  
Clear pricing instructions.
- Feb 07: Expand product range.  
Trends and innovations.  
Exhibited at four major fairs.

## Re-invigorate past advances

- Shrink resist treatment.
- Sportwool.
- Weavable singles.
- Stretch (Optim).



The image shows two socks, one above the other, rendered in a stylized, blocky, pixelated aesthetic. They are primarily olive green with a teal blue cuff at the top and a darker teal blue patch at the heel. The socks are positioned on the left side of the slide, partially overlapping a light blue geometric shape.

## Pipeline

- Merino and Microfibre.
- Merino and ‘splittable’.
- Cool Merino.
- Whiter and brighter.
- Reduced pilling.
- Active sports products.