



Superior functions of “HEATTECH” and “Ultra Light Down” Made Possible By Advanced Textile Technologies

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UNIQLO's
Marketing and
Merchandising
Capabilities



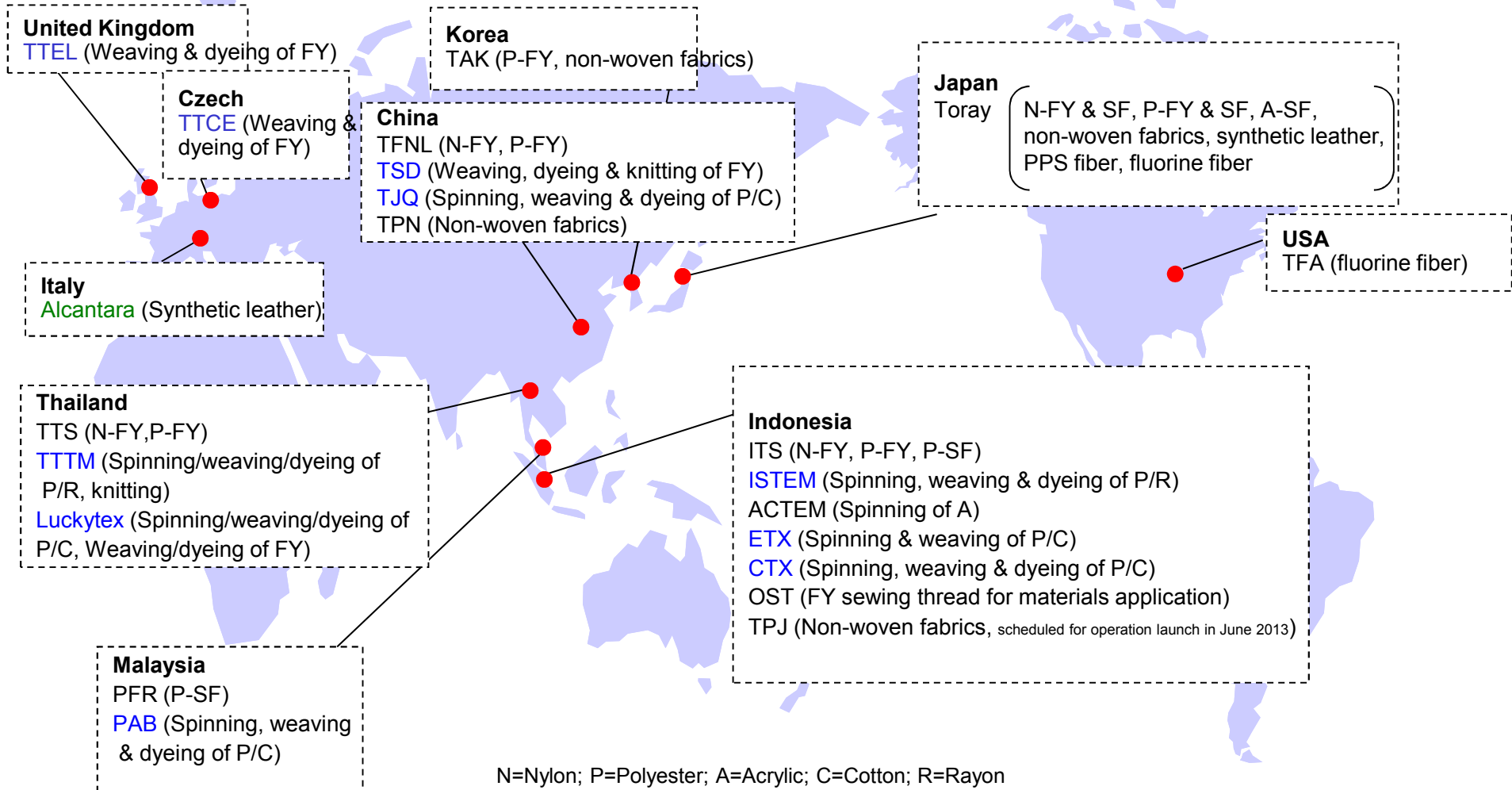
TORAY's Japanese
Textile Technologies,
High Quality &
Worldwide Production
Network



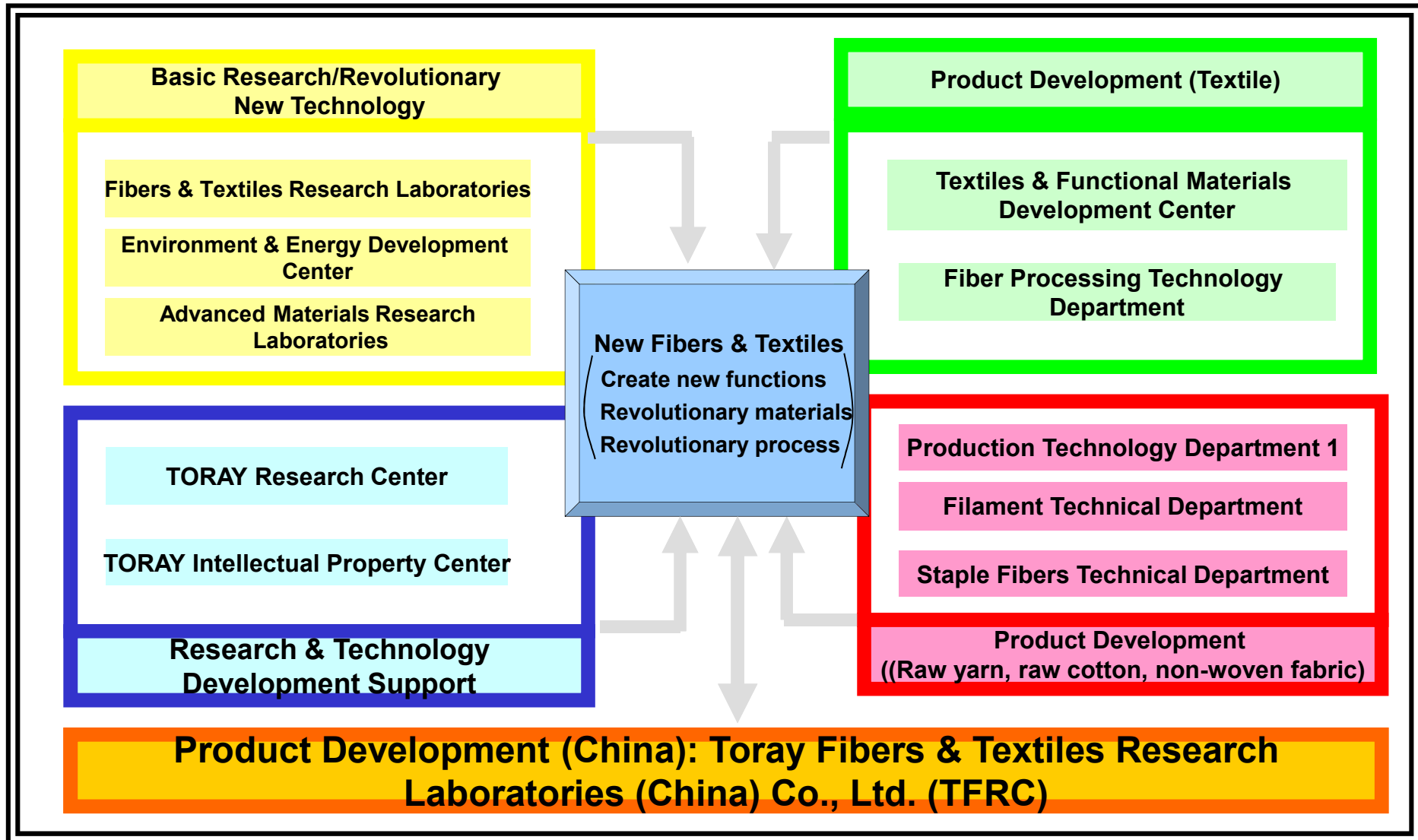
Share each other's expertise
to work as a virtual company



Jointly develop and provide dream products
that please customers around the world!



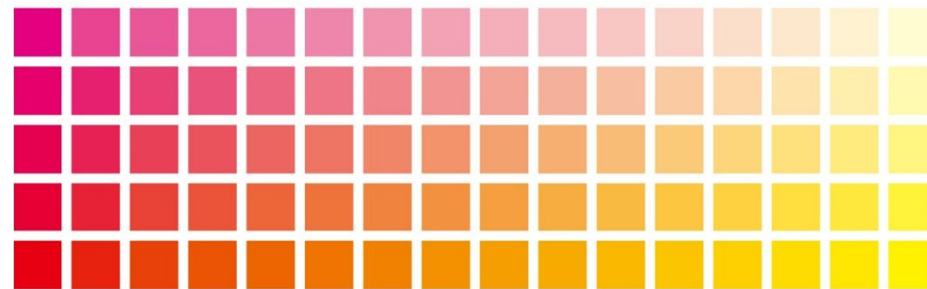
Production network spanning across Japan and the world



Integration of technologies of the TORAY Group



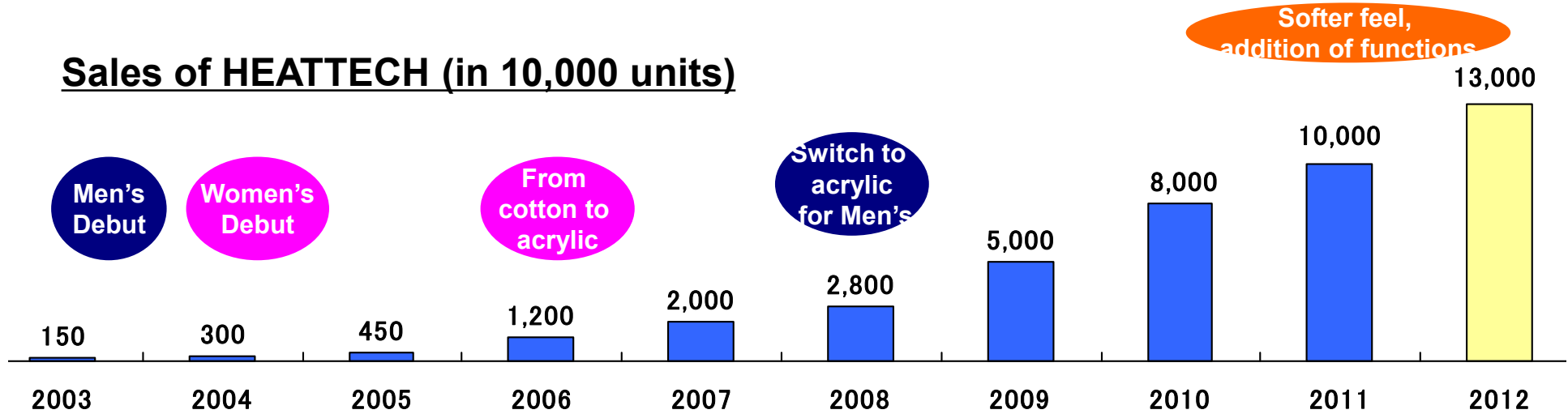
HEATTECH



JAPAN TECHNOLOGY

HEATTECH is the smart way to stay warm and comfortable in cold weather. Developed by UNIQLO and Toray Industries, the world's leading fiber maker, this revolutionary material keeps you warm by retaining body heat. Now you can dress more inventively in cold weather by taking advantage of this sheer, innovative fashion technology from Japan. Open up exciting possibilities. Give yourself a fashion edge with HEATTECH.

Sales of HEATTECH (in 10,000 units)



Women's



Men's

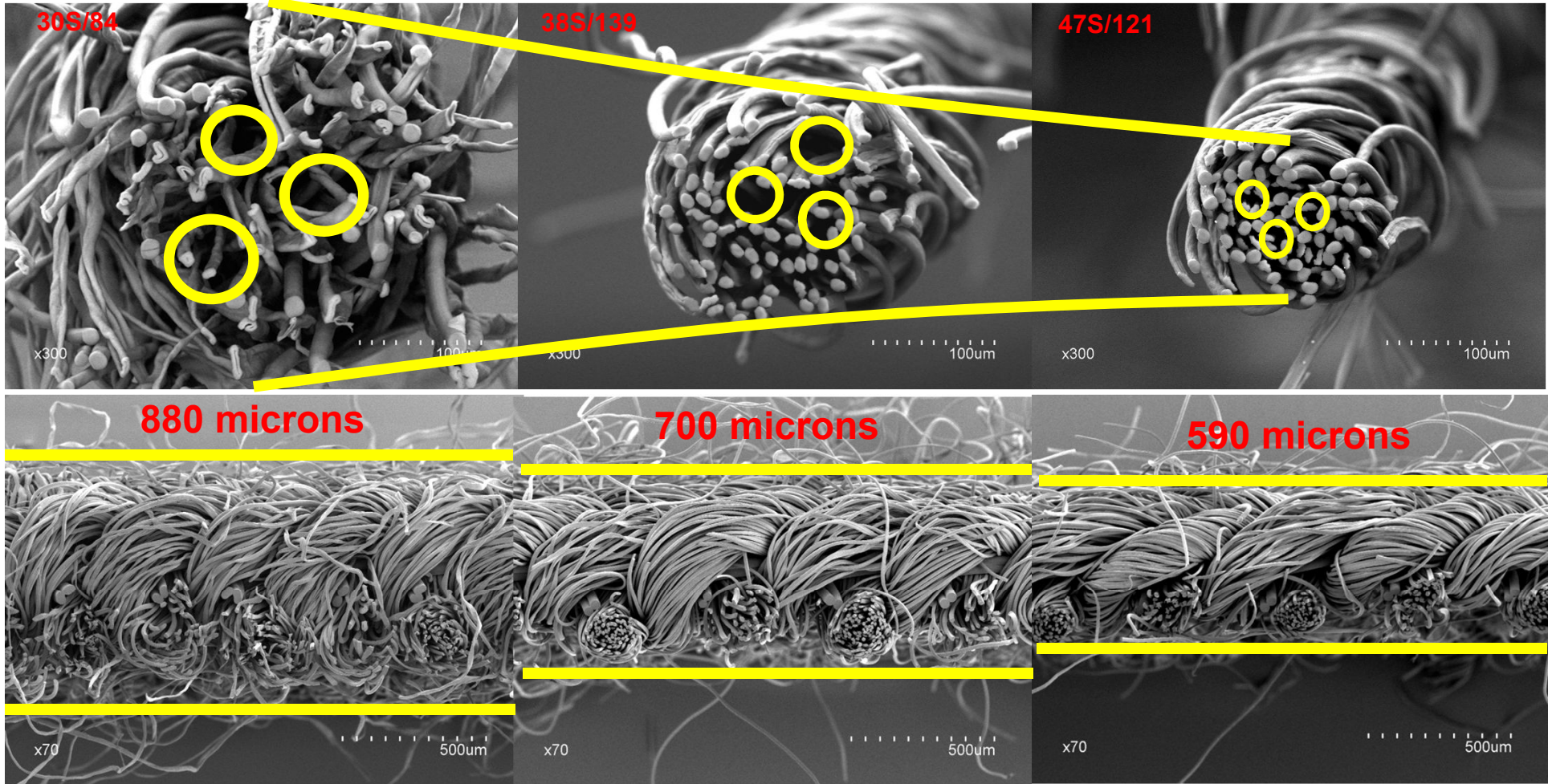


New functions are added every year for continued evolution

Year 2004

Year 2006

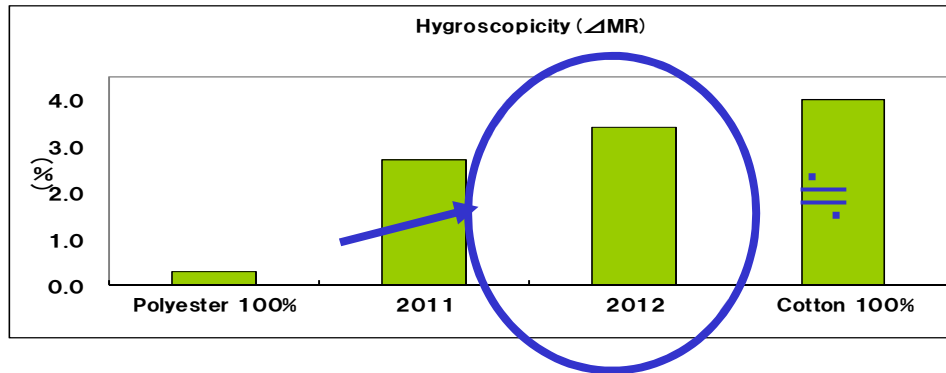
Year 2012



	Year 2004	Year 2006	Year 2012
CLO Value (Heat Retention Property)	0.170	0.160	0.170

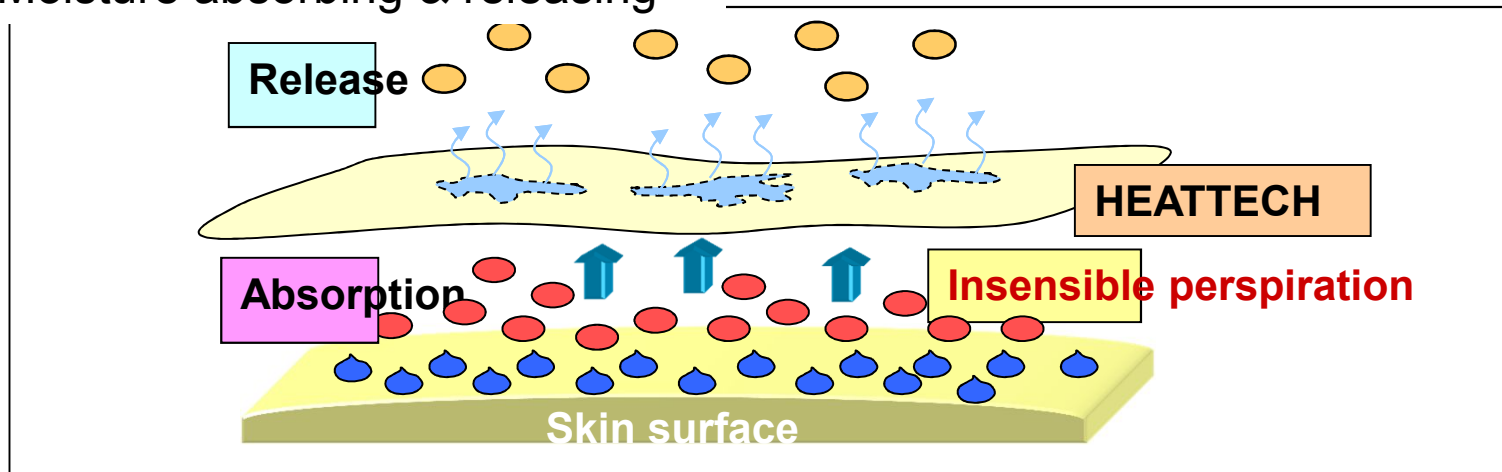
<Men's>	<Women's>
New! Moisture absorbing & releasing	
Updated! Odor Control	Updated! Moisturizing
Quick Dry	Lightweight
Heat Generation	
Heat Retention	
Antimicrobial	
Stretchable	
Anti-Static	
Dimensional stability	

<Reduced stickiness (Improved moisture absorbing & releasing function)>



$$\Delta \text{MR absorption and desorption of moisture} = \frac{(30^{\circ}\text{C} \times 90\%) - (20^{\circ}\text{C} \times 65\%)}{\text{Absolute dry}}$$

<Moisture absorbing & releasing >

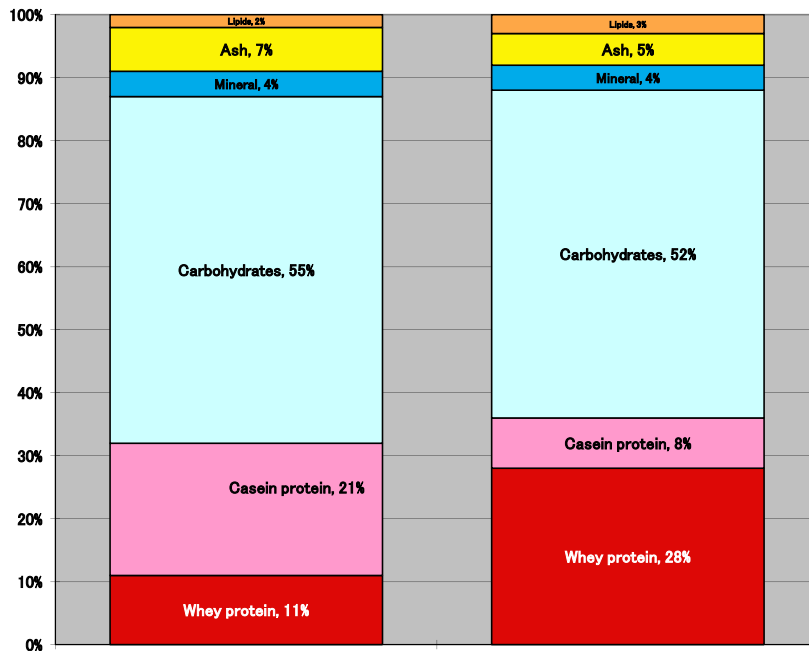


Further improve the satisfaction with the current functions and reduce the feeling of stickiness at the same time

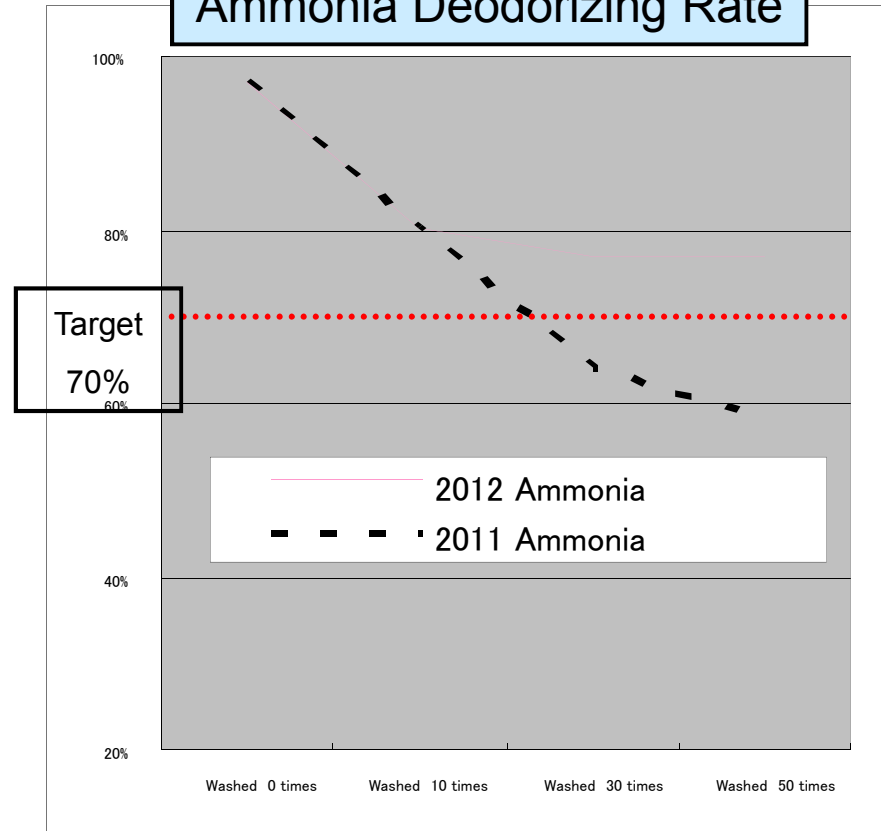
Women's	Update	Increase the percentage of moisturizing content
	Effect	Improved level of moisture in fabric

Men's	Update	Incorporate odor control
	Effect	Improved wash durability Softer texture

Increased Whey Content



Ammonia Deodorizing Rate



HEATTECH's role in reducing the effects on the environment

Effects on saving energy and reducing CO2

The superior heat retention function of HEATTECH allows us to comfortably lower the room heater temperature by 1 degrees Celsius. We calculate the effect of this on saving of energy and reducing CO2.

[Energy Conservation]

$$58\text{W/household} \times 12.5\text{million households} = 730,000\text{kw}$$

100million units divided by [8 units/household] = 12.5 million households
The amount of energy conserved by lowering the heater temperature by 1°C is
58w/household

[CO₂ Reduction]

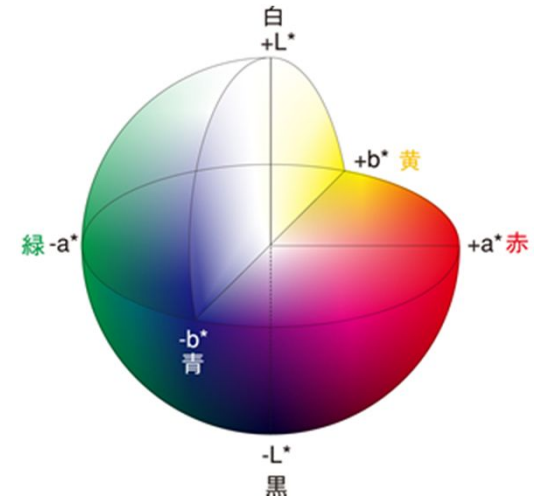
$$13\text{kg-co}_2\text{eq/HEATTECH item \& season} \times 100\text{million units} \\ = 1.3\text{million tons}$$

Reduce CO₂ emission by lowering the room heater temperature
The amount of CO₂ reduced by every piece of HEATTECH is equivalent to the
amount of CO₂ absorbed by a cedar tree

It is equivalent to a forest area of approximately
1,093km², or half the area of Tokyo.

UL
ULTRA
LIGHT
DOWN

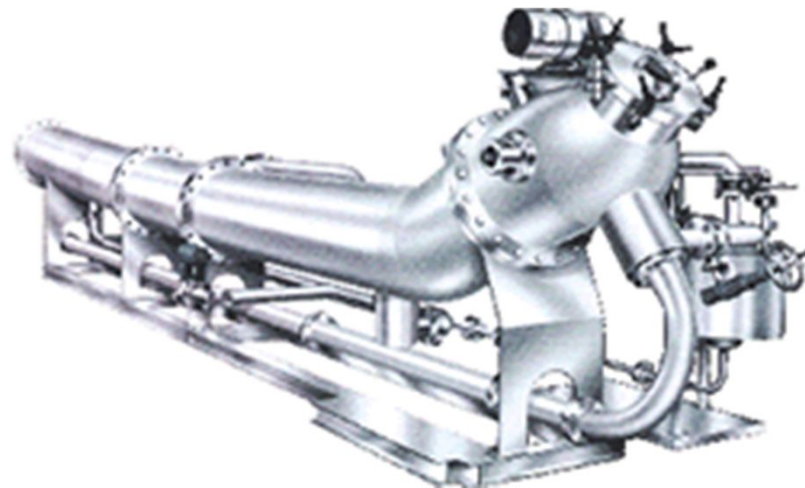
2011:About 50 colors, 2012:Over 100 colors + prints



Integration of advanced Japanese textile technologies
with skilled craftsmanship

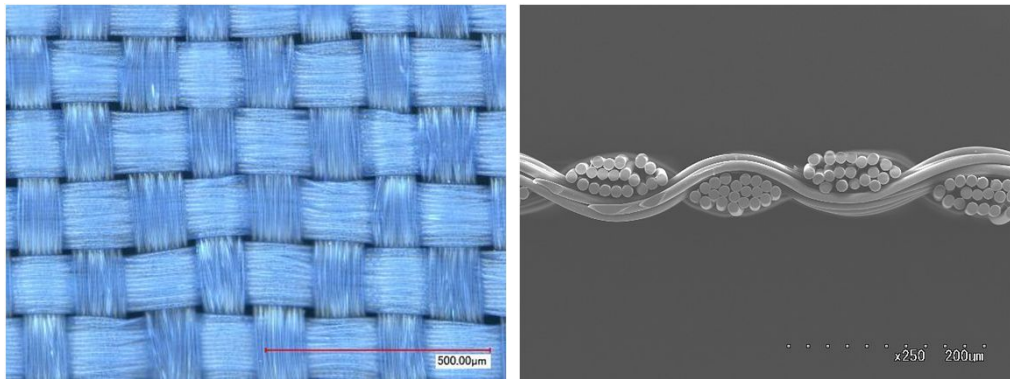


We **succeeded in dyeing nylon evenly**, using the dyeing expertise that we have accumulated thus far and using a special dyeing machine



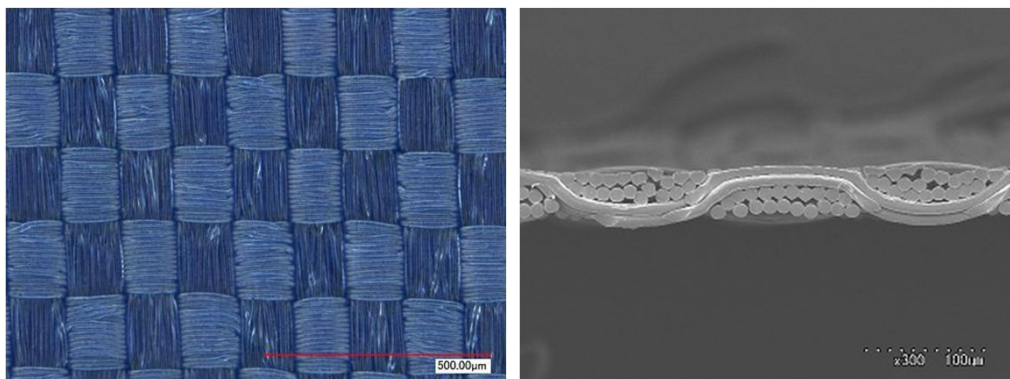
The use of an ultra fine nylon thread with similar thickness to a human hair makes it soft and light!

Magnified image of fabric before processing



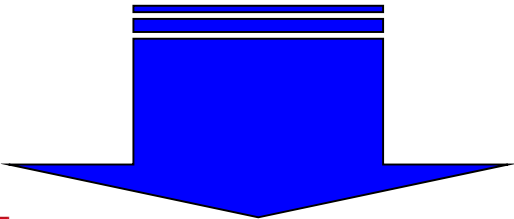
Heat and pressure are applied to further close the mesh between threads, making it difficult for the down to escape.

Magnified image of fabric after processing



- Soft
- Light
- Warm

Evolution continues with advanced textile technology



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