

Sustainable Textiles



Cheryl Kindness

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Who are we ?



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TRUSTED by the world's best furniture manufacturers



HAWORTH®



Kinnarps

interstuhl



SCANDINAVIAN
BUSINESS SEATING



nurus



Wilkhahn

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SPECIFIED by the world's top architectural practices



Gensler

MMOSER ASSOCIATES ■■■
CREATING WORKPLACES FOR GLOBAL BUSINESS

NIGHTINGALE
associates ■■■■■

SHEPPARD ROBSON
ARCHITECTURE URBAN DESIGN PLANNING INTERIORS

SWANKE HAYDEN CONNELL ARCHITECTS

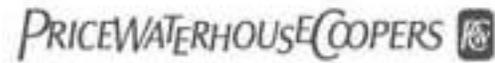
KLING STUBBINS



ATKINS

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CHOSEN by the world's blue-chip corporations



BOMBARDIER

SIEMENS

Microsoft



Transport
for London



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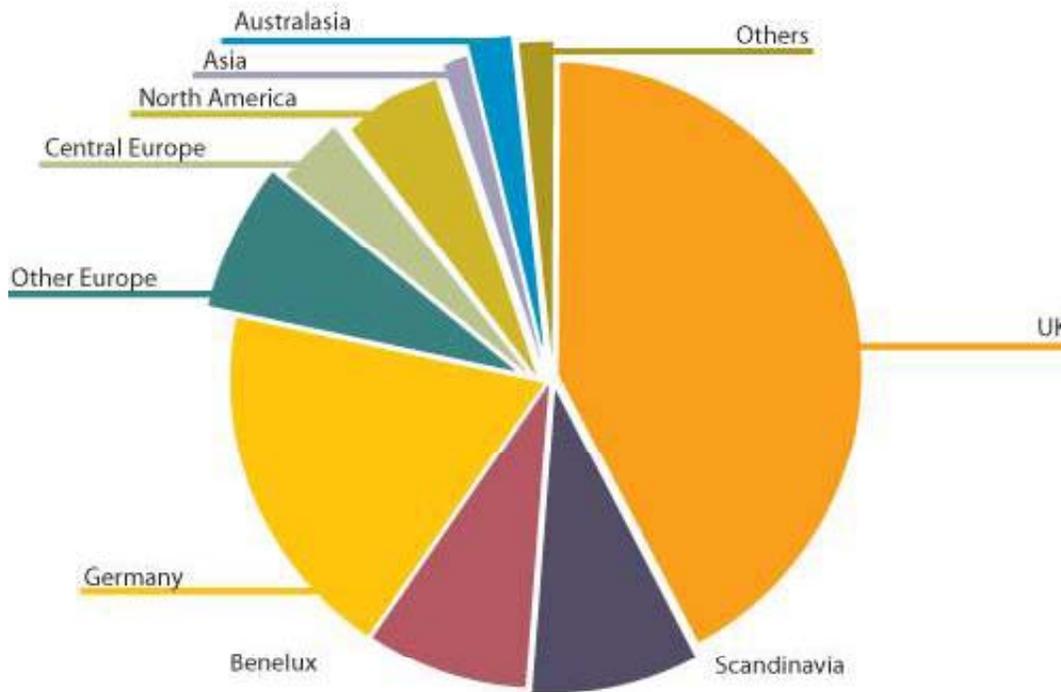
WE BRING COLOUR, DESIGN AND PERSONALITY
TO A WORLD OF COMMERCIAL INTERIORS

Yes, it's the textile that does this!

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We are an international story

Geographic split



**8 million metres / year =
150,000 metres/week =
25,000 metres/day:
73% contract,
27% transport**



People

475 Staff
255 UK
220 Overseas



UK facilities

Huddersfield, Mirfield, Nottingham

Overseas offices & warehousing

- Germany
- Denmark
- USA
- China
- Hong Kong
- Australia



Overseas manufacturing

Lithuania

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Market sectors



Office



Education



Hospitality and Leisure



Transport

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Product Development



Technical



Aesthetic

Performance



Environmental



Innovation

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Environmental branding

“Designers are in a powerful position to create a better world... Or to contribute to further destruction.”

Victor Papenek, Design for the Real World



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What would you wear if you were a chair?

Rapidly renewable natural materials: resources that can be replenished on an annual basis



"We love Camira...
You're our new
go-to for interior
fabrics!"

*David Pugh
Gensler San Francisco
Neocon 2011*

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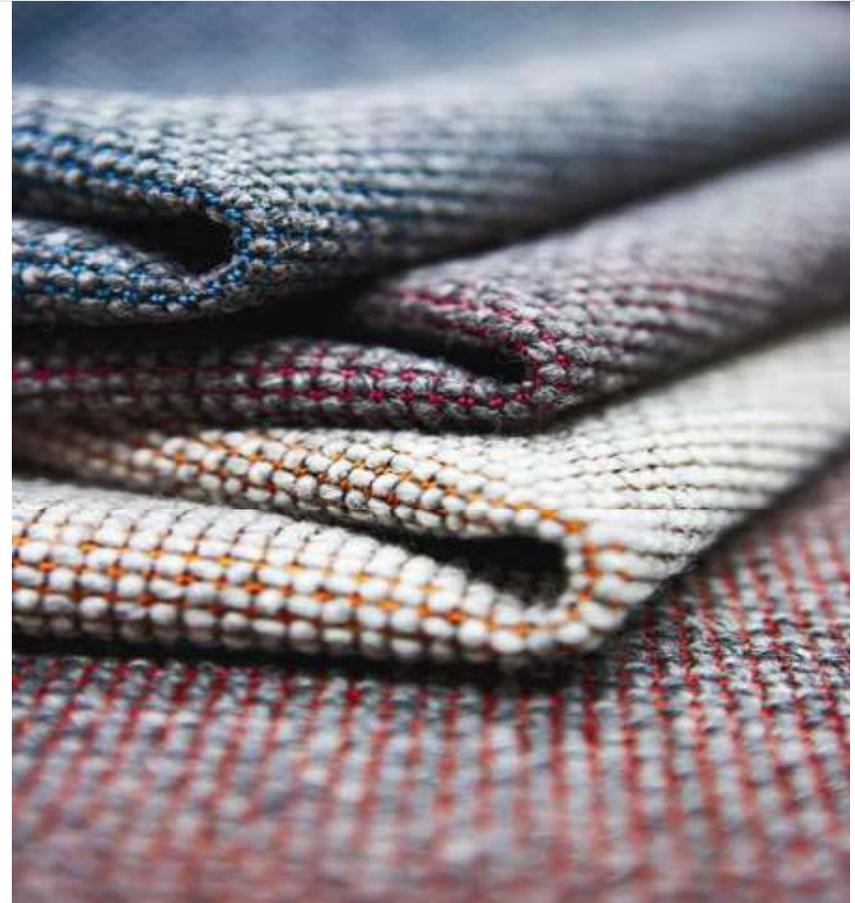
Fiber types

Natural fibers

- Animal – rapidly renewable
- Plant – rapidly renewable

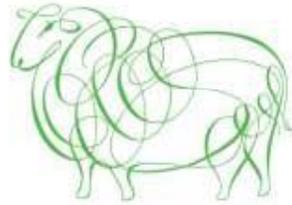
Man-made

- Petroleum based synthetics – finite
- Natural polymers - renewable



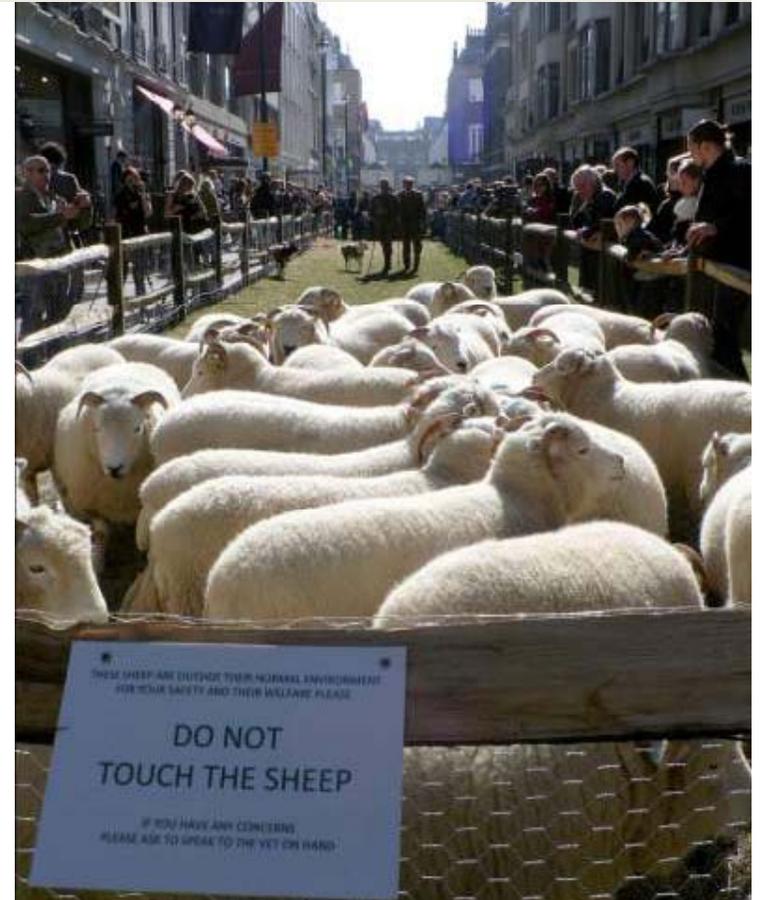
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Wool



THE CAMPAIGN FOR WOOL
PATRON: HRH THE PRINCE OF WALES

Rapidly renewable
Totally biodegradable
Low CO2 impact
Inherently soil hiding
Does not attract dust or dirt
Breathable
Insulating
Low smoke toxicity
Low flame spread
Self-extinguishing



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Wool works well on its own...

but it's the perfect accompaniment to natural bast fibers

**Strong, woody fibers found
inside the bark of certain
plants**

- Flax
- Jute
- Ramie
- Hemp
- Nettles

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Nettles

STING Project

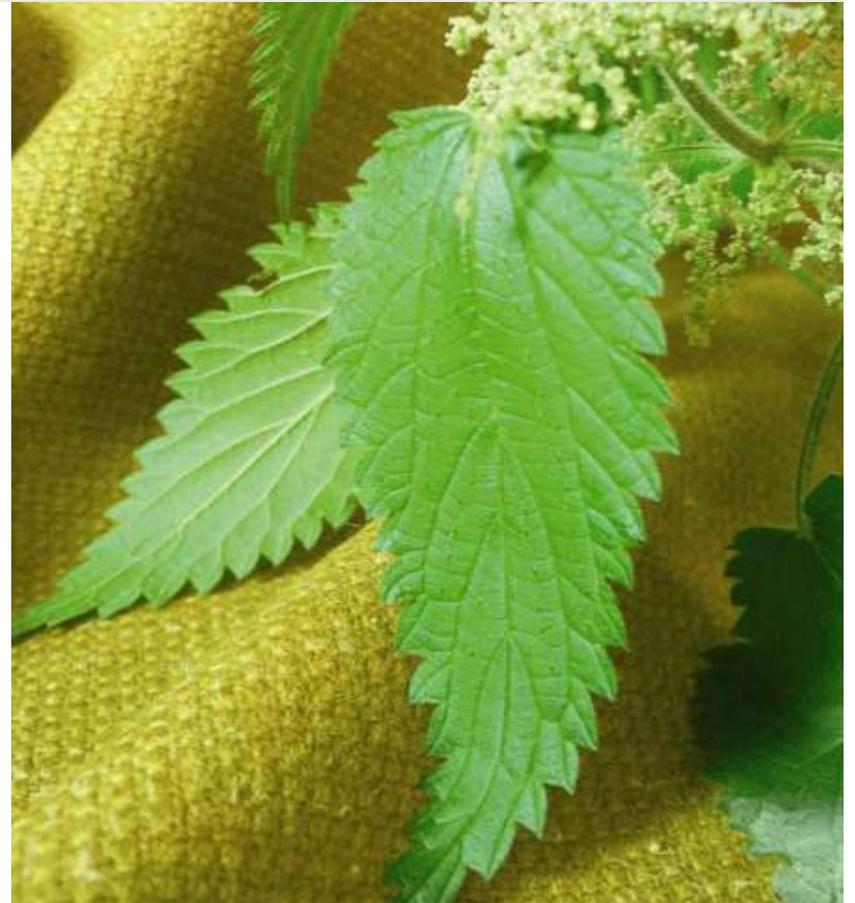
(Sustainable Technology in Nettle Growing)

£1m. project in conjunction with

De Montfort University & DEFRA

Inherently flame retardant

Naturally anti-microbial



Hemp

Decorticationon the farm where the hemp is grown, in Leicester.

Blended with wool....at our local spinner

Yarn spun....at our local spinner

Woven....in our local mill

Piece dyed....at our local dyehouse



Recycling -



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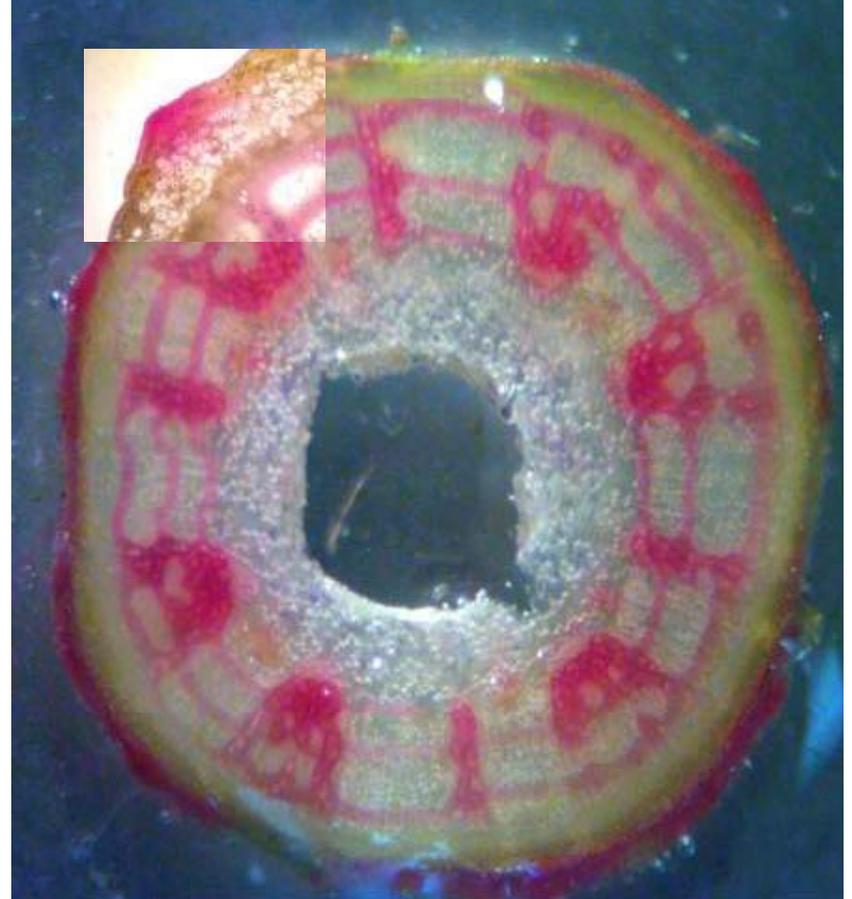
Processing

Decortication

Separates fiber from outer bark and woody core

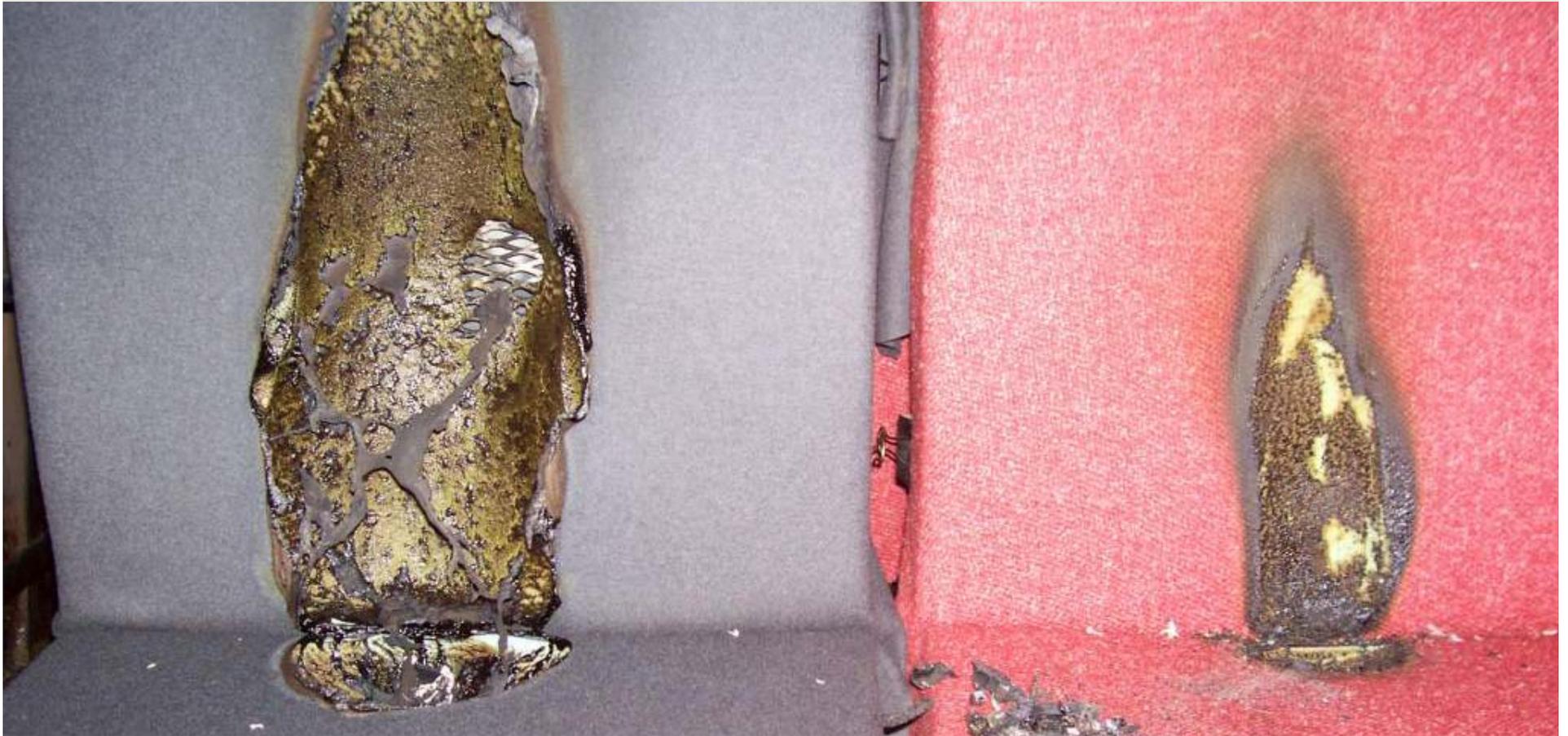
New mechanical decortication process

No water / chemical / enzyme retting



SMART Performance

- Naturally fire safe



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The need for sustainable fabrics



We're using

too much oil

in making polyester, polypropylene, nylon & acrylic

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Recycled polyester

Post-industrial recycled polyester

Diverts waste from landfill

1.7m Kg each year

Embodied energy - 66% improvement



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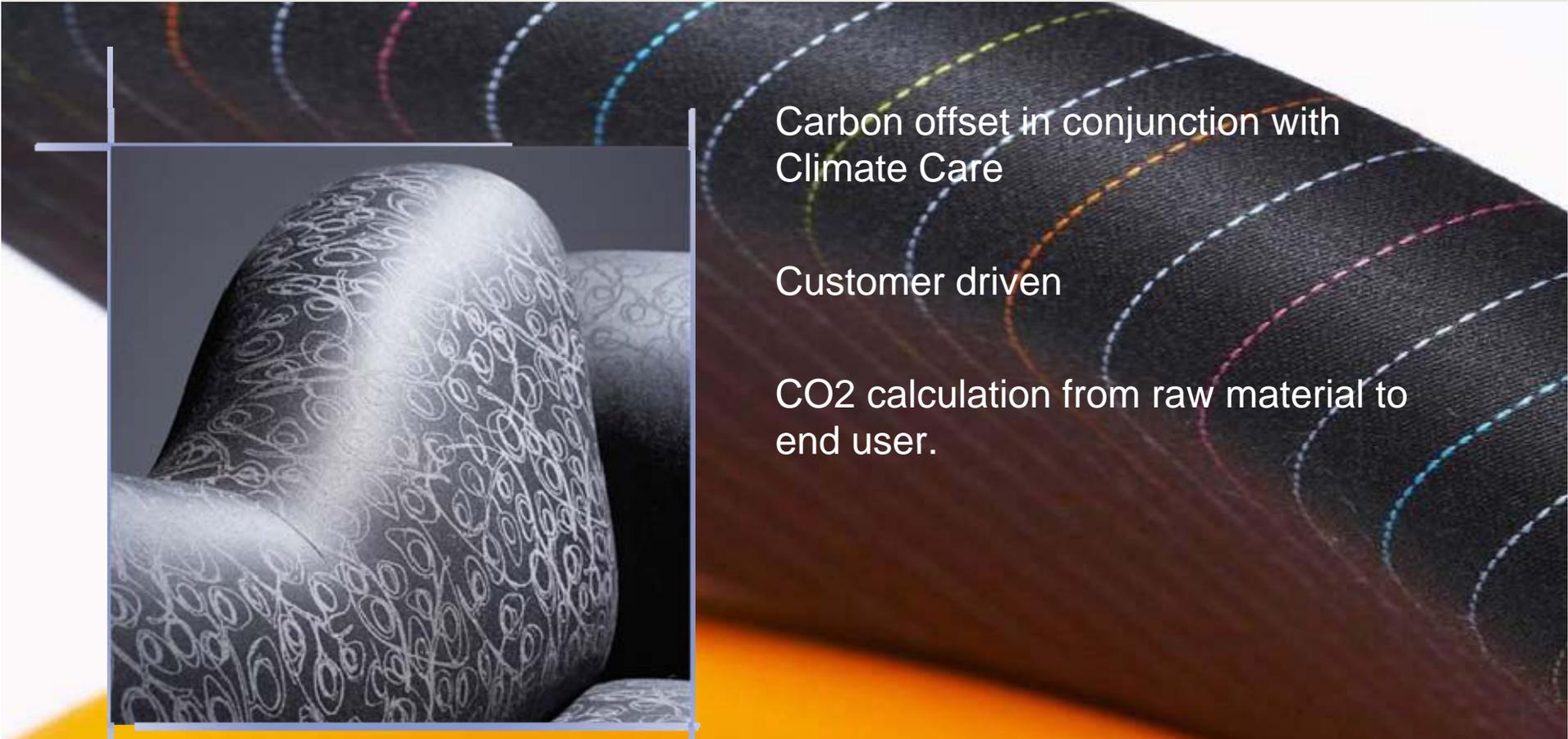
Recycled polyester

Residual yarn stripped from the cones and recycled by supplier



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Alternative approaches



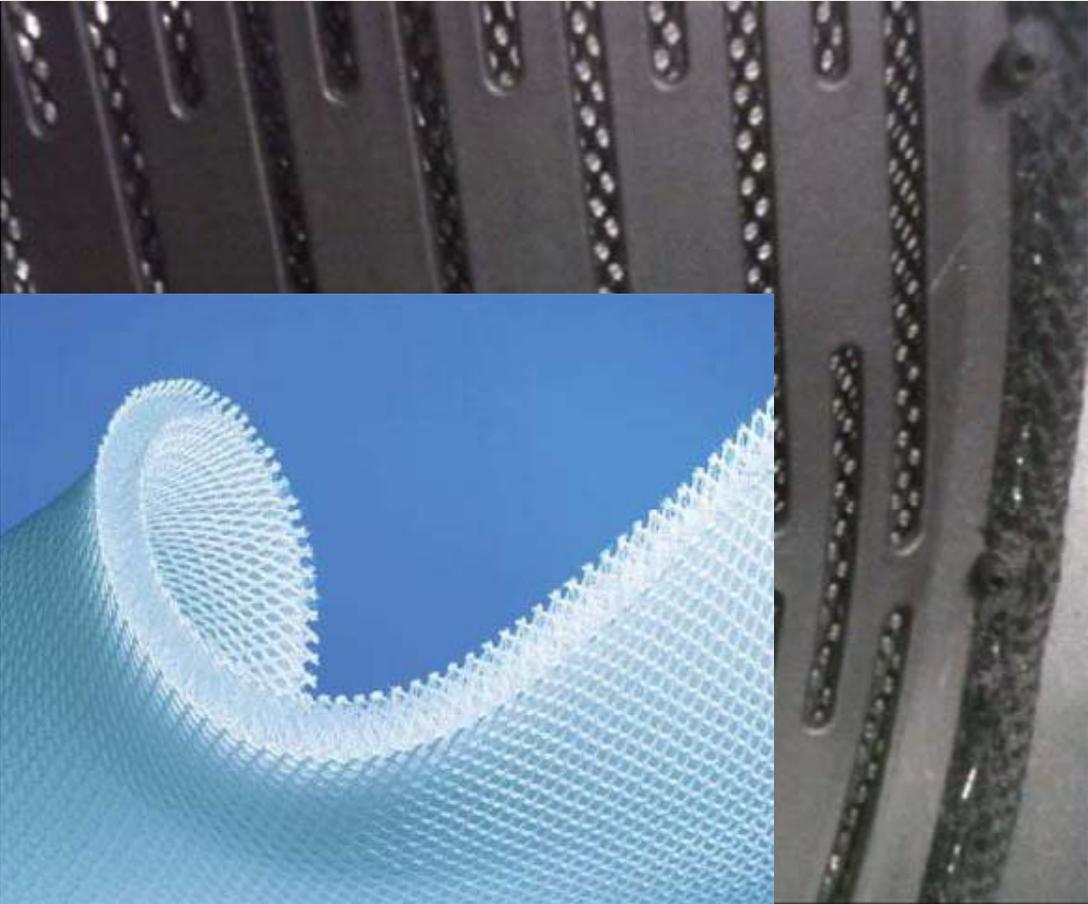
Carbon offset in conjunction with
Climate Care

Customer driven

CO2 calculation from raw material to
end user.

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Alternative approaches



Spacer fabric
Ultrasonic welding

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Alternative approaches

Longevity:

24/7+ fabric

500,000 Martindale cycles

10
year guarantee
24 hour round the clock usage



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Alternative approaches

Fewer components:

Net fabrics

Suspension seating

Remove the foam



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One-stop-shop for interior transport solutions!



holdsworth

Weight reduction



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Weight reduction -- Flat-woven fabric

Contemporary flat woven seating fabric for
bus, coach or rail interiors
Light weight construction



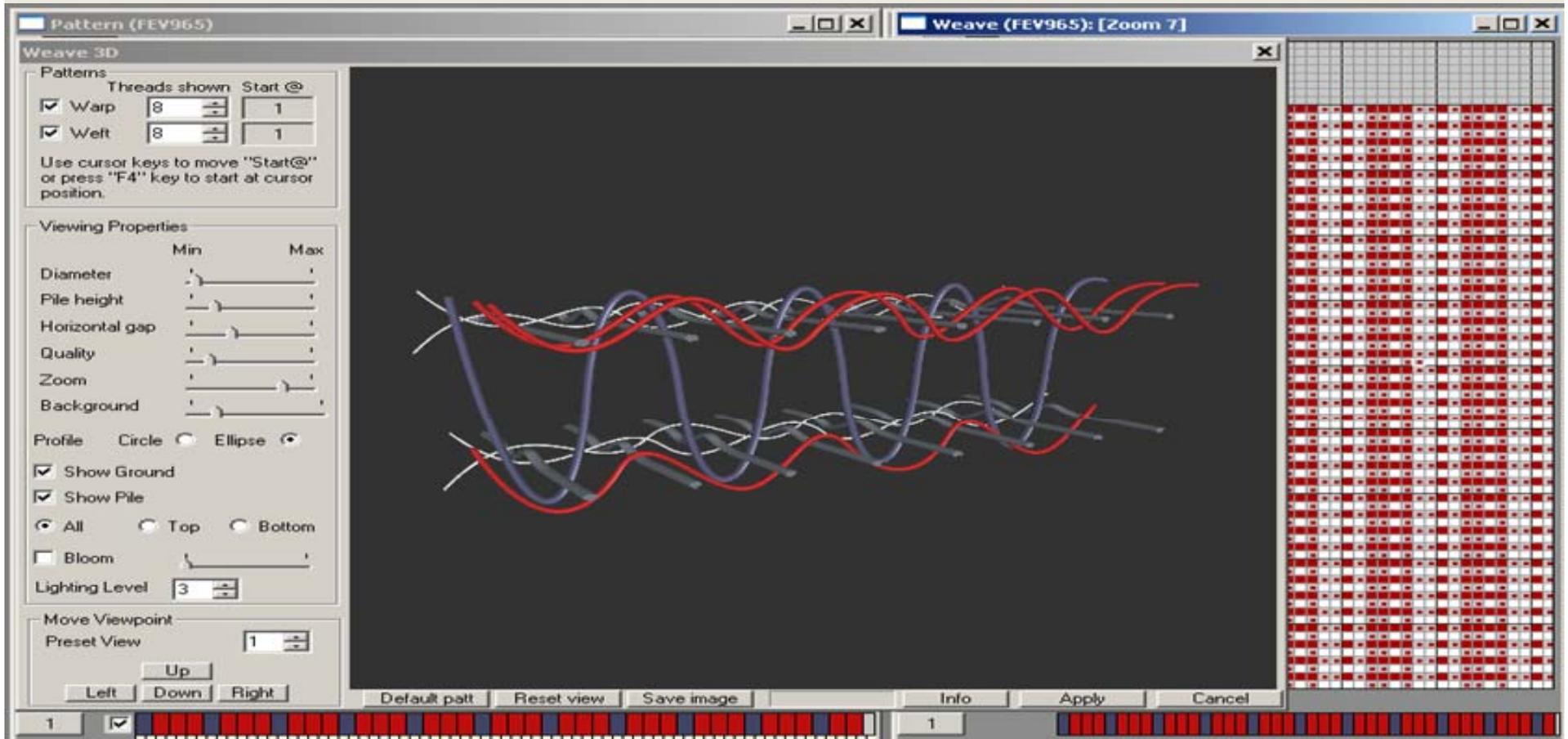
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Waste saving through design



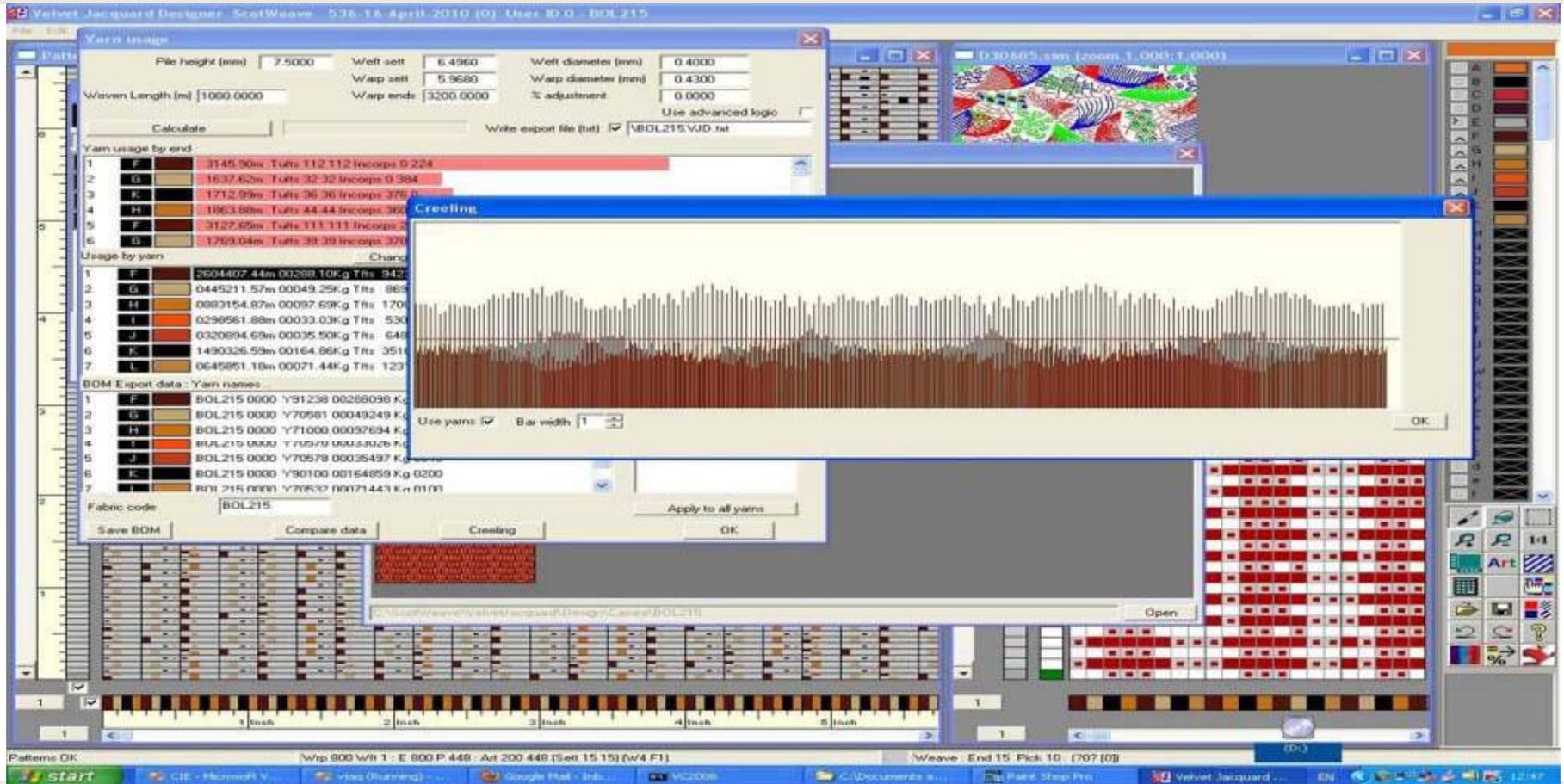
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Waste saving through design



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Waste saving through design

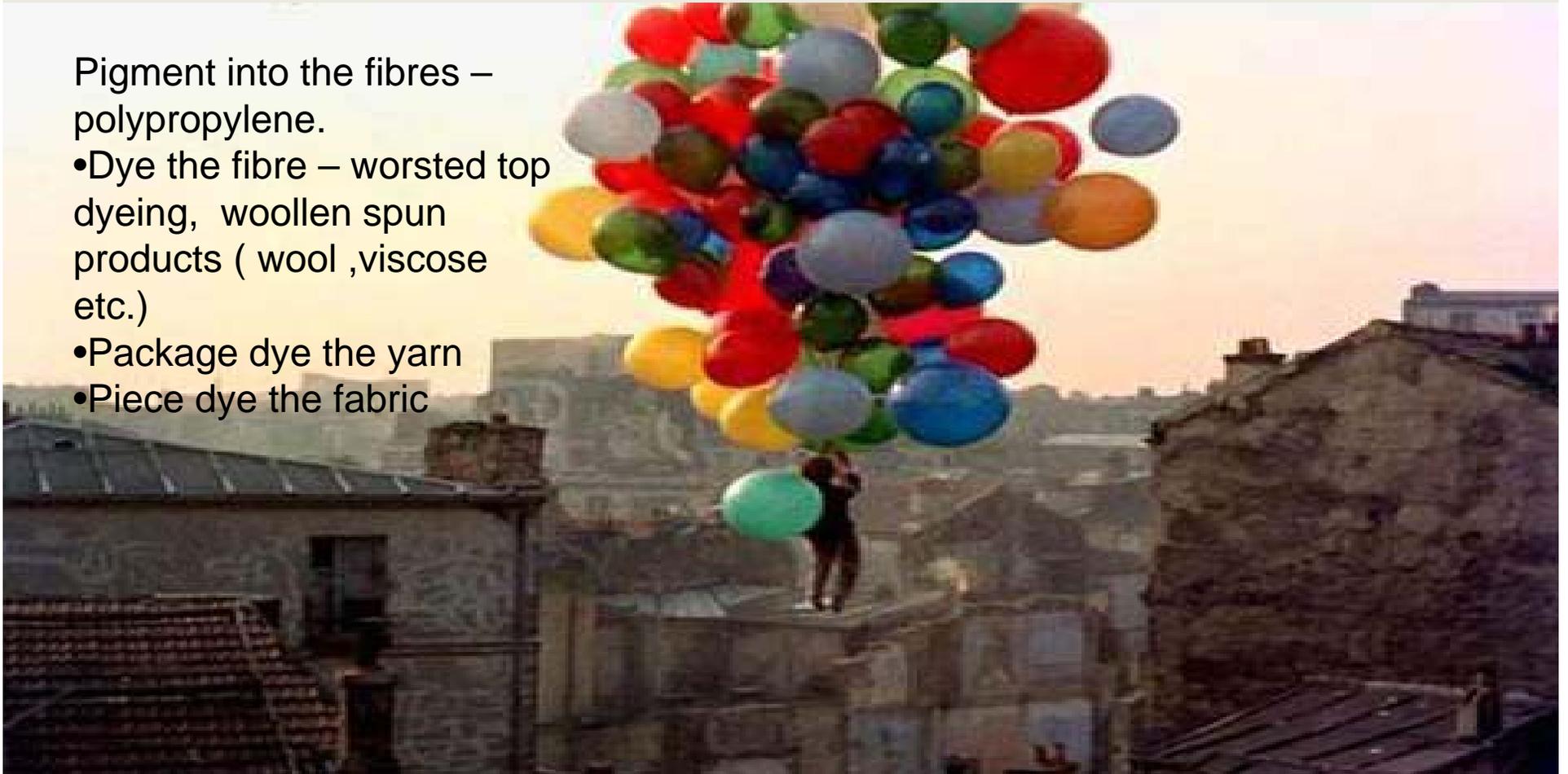


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Colour

Pigment into the fibres –
polypropylene.

- Dye the fibre – worsted top dyeing, woollen spun products (wool ,viscose etc.)
- Package dye the yarn
- Piece dye the fabric



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Future



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