GLOBAL TRENDS

IN

CARPET TILE BACKING

TILE - FRONT AND BACK

THE FRONT

(X) Modular Product **wows** with a **subtle rib** and **chunky texture** balanced with **soft linearity** and **textured punches** of colour.

A **creative twist technology** allows for maximum **colour pop!**

The palette is a **harmony of sophisticated neutrals and energetic hues** plus **vibrant dashes of colour**.

THE BACK

Vinyl

TILE BACKING - PURPOSE

- **LAY FLAT**
  - Saucering
  - Doming
- **DIMENSIONAL STABILITY**
  - Edge Curl
  - Expansion / Contraction (Temperature & Humidity)
- **MINOR IRREGULARITIES IN SUB-FLOOR**

5 PHASES OF CARPET TILE

1970 - 1980	AWARENESS
1980 - 1990	PERFORMANCE
1990 - 2000	DESIGN
2000 - 2010	SUSTAINABILITY
2010 - 2015	MARKET SEGMENTATION

MARKET SEGMENTATION
2010 - 2015

C /C OFFICE

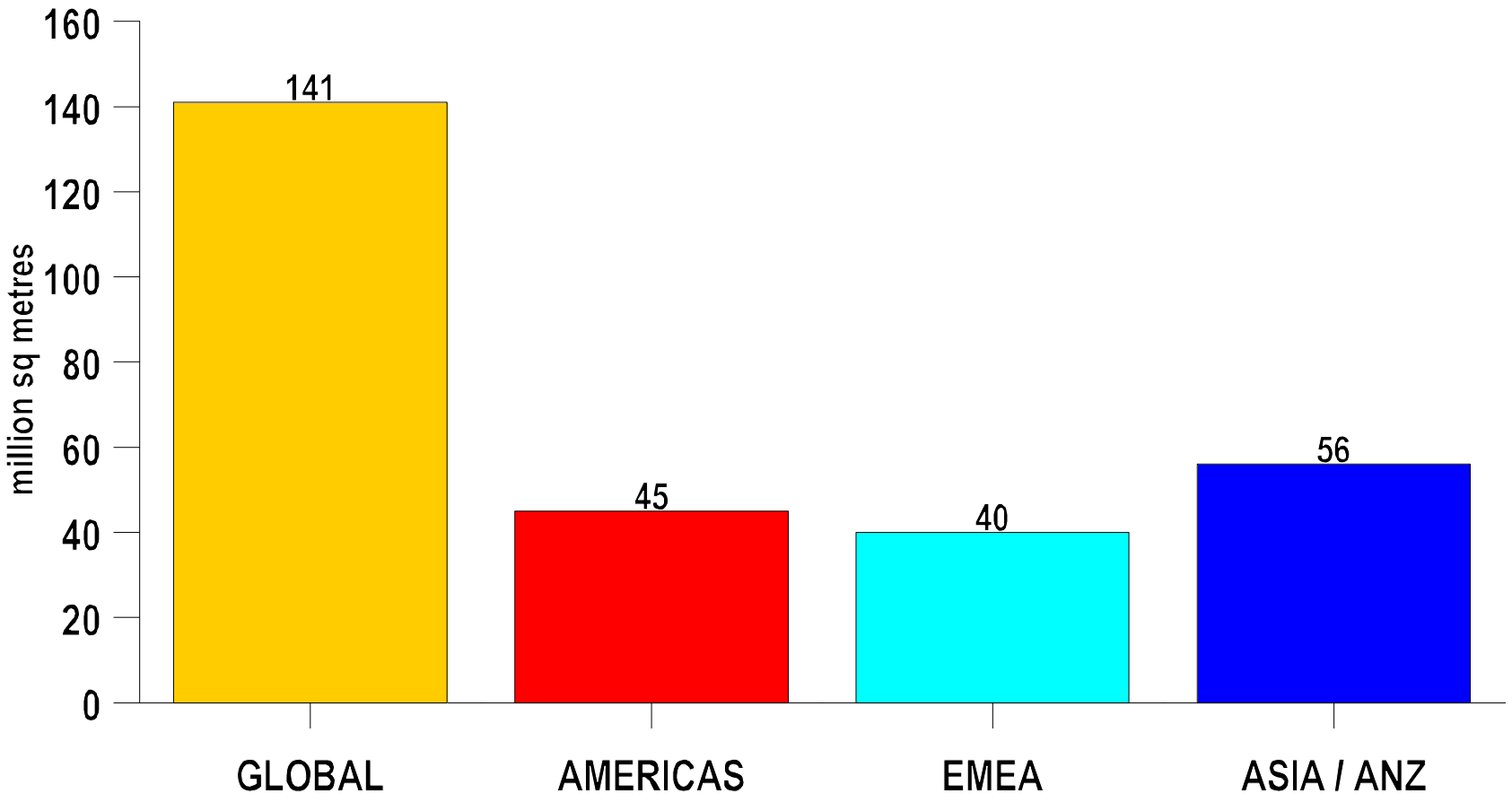
{54% Americas}
{70% Europe}
{84% Asia / ANZ}

IN-STORE + **HOSPITALITY** + **LEISURE**

EDUCATION + **HEALTHCARE** + **GOVERNMENT** + **TRANSPORT**

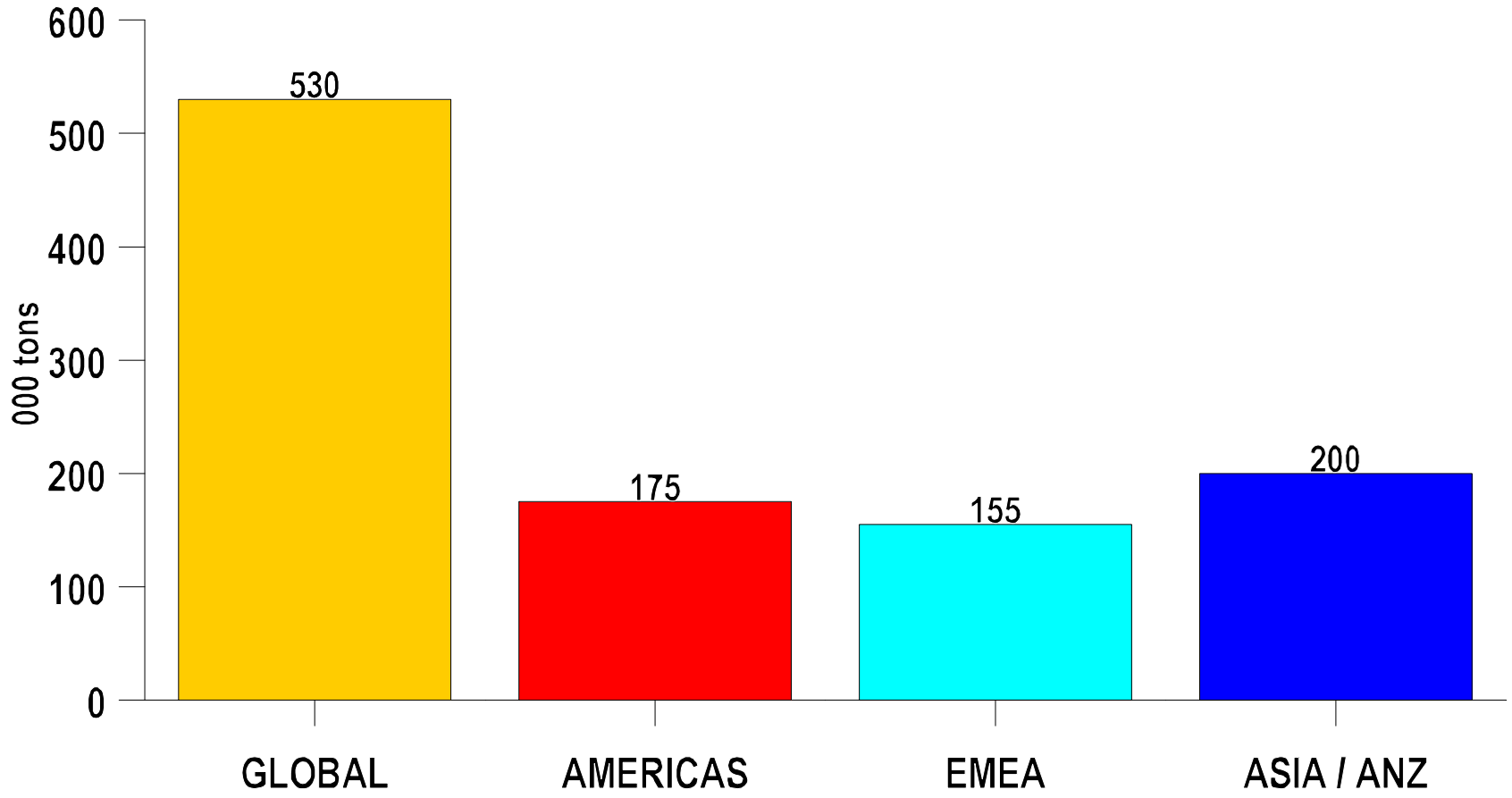
2010 CARPET TILE CONSUMPTION

million sq metres



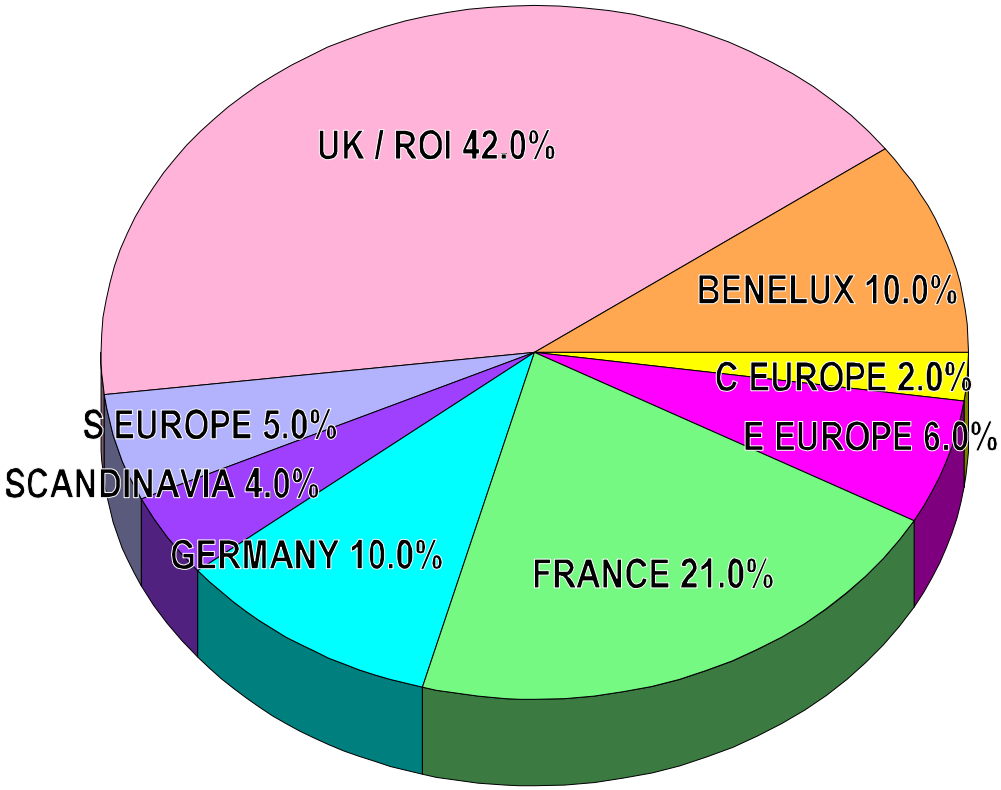
2010 CARPET TILE DISPOSAL

thousand tons
excl New Build



CLOSER TO HOME

2010 EUROPE CARPET TILE CONSUMPTION % BY COUNTRY / REGION



X-SECTION TUFTED TILE

PILE = 15%

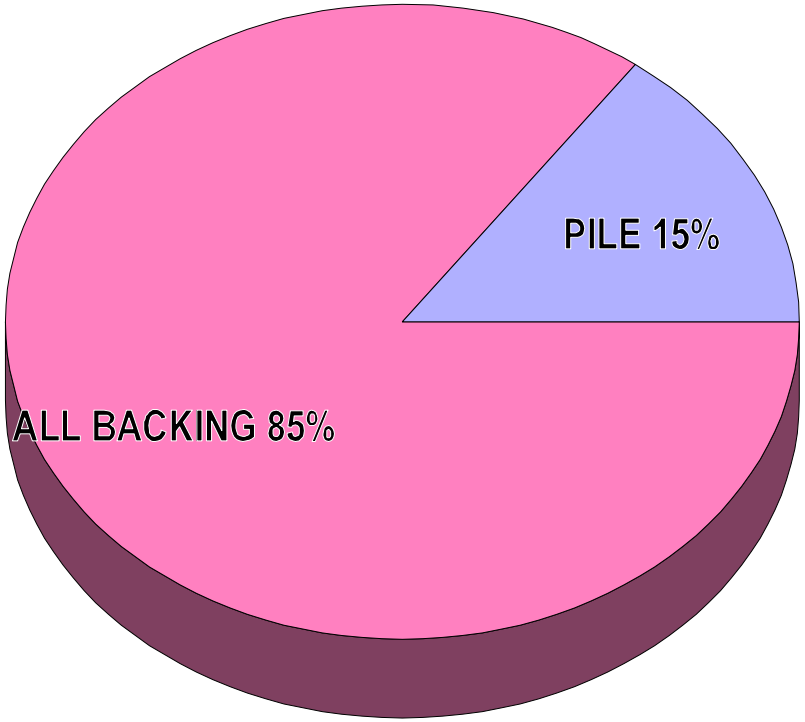
PRIMARY = 2%

PRE-COAT = 15%

GLASS FIBRE = 1%

TILE BACKING = 65%

(SECONDARY) = 2%



MUCH CLOSER TO HOME

2010 UK / ROI TILE DISPOSAL

=

60,000 TONS

=

51,000 TONS TILE BACKING

AVERAGE TILE INSTALLATION SIZE

=

0.5 TON

=

120,000 TILE DISPOSAL POINTS IN 2010

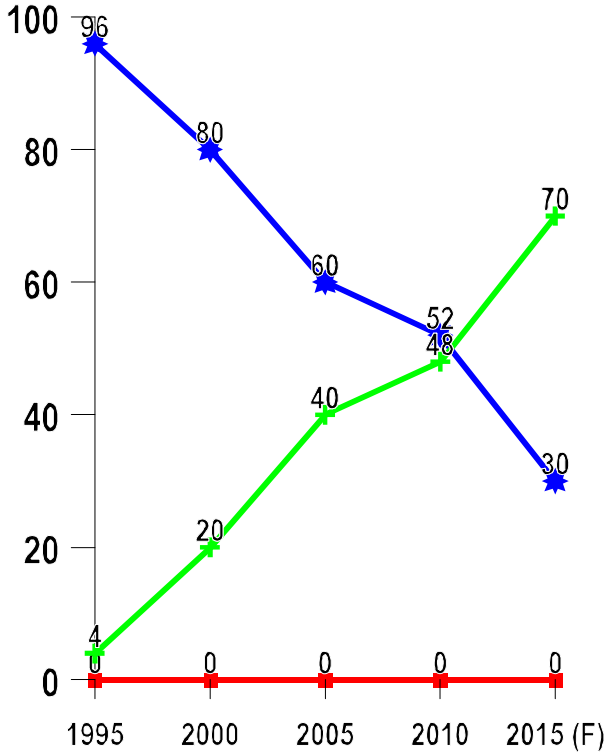
2010 CARPET TILE PRODUCERS (In-House Backing)

	PRODUCERS	BITUMEN	PVC	OTHERS
AMERICAS	12	0	8	8
EMEA	18	12	4	7
ASIA / ANZ	23	3	18	4
TOTAL	**53**	**15**	**30**	**19**

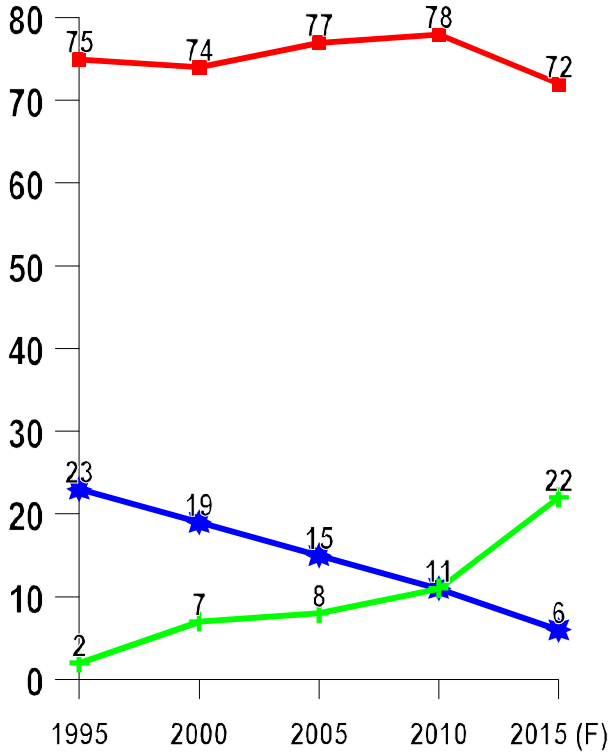
TREND BY BACKING BY REGION

% By Volume

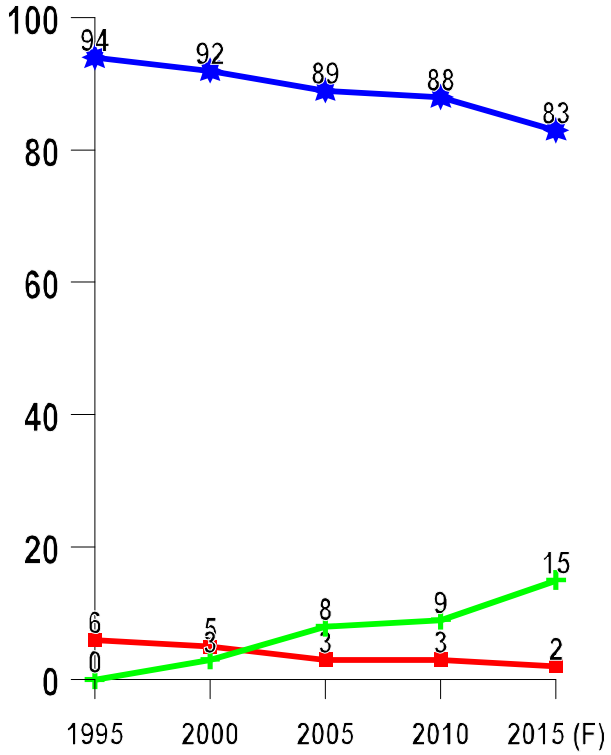
AMERICAS



EMEA

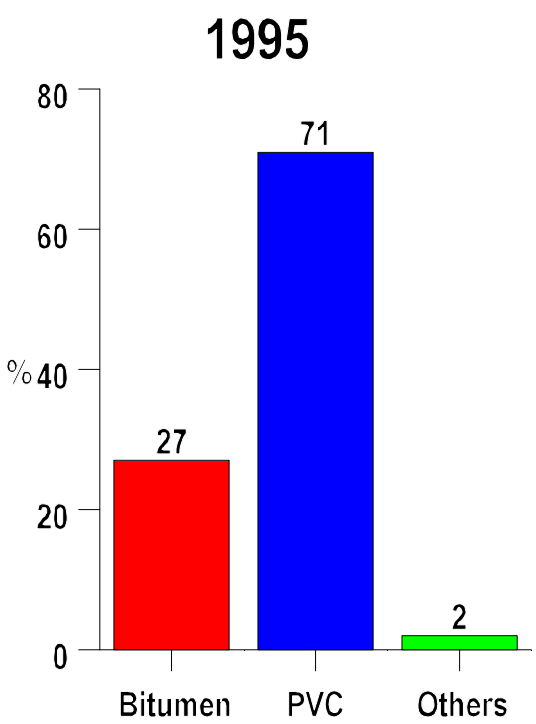


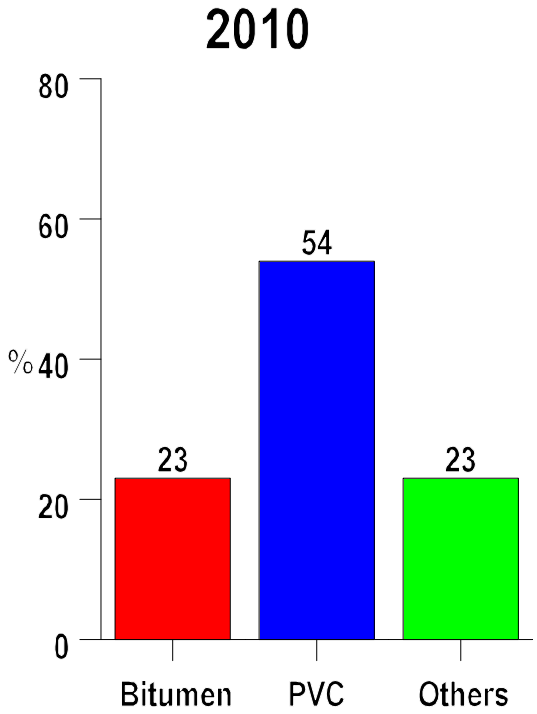
ASIA / ANZ

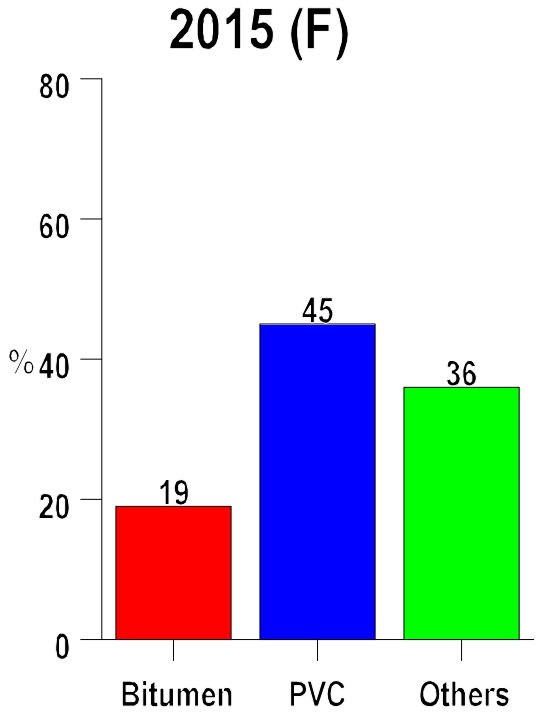


= Bitumen = PVC = Others

GLOBAL TREND







BACKING PREFERENCES

Historically, **Vinyl** has been the Tile Backing preference in Americas (fusion bonding pioneers) + Asia / ANZ (Japan vinyl conglomerates) with **Bitumen** (Dutch pioneers) preferred in Europe.

Until late 1990^{S}, nothing radical changed in Backings.

BITUMEN		PVC	
+	Cheapest Backing	+	Mid Price Backing
+	Performance (Stability)	+	Performance (Stability)
+	Proven Track Record	+	Long Term Success
+	No accepted Health issues / No VOC	+	Easiest / Cleanest Installation
+	Flexible (rubber modified)		
-	On Grey List (Restricted)	-	Combustion (Toxic - Chlorine, Dioxins)
-	Scarring	-	Plasticiser Migration
-	No commercially viable re-cycling (yet!)	-	Perception

WHAT HAS CHANGED?

The words Environment and Sustainability! From USA, Interface, Milliken, Shaw and Others have driven a Carpet Tile Agenda based on these words. And, being major global players, **Specifiers of flooring** - Architects, Designers, End Users - globally, have listened and **taken this Agenda on board in product specification**. **'Eco' this and 'Re' that** are, commonplace with all carpet tile producers. **Some fact. Some fiction. Some highly confusing statements.** Competition in re-cycled content. Whilst most emphasis to date has been on pile yarn composition, actions by important players Shaw and Milliken in **exiting Vinyl tile backing** in favour of more environmentally friendly and sustainable backings are significant. Tile backing is not immune to change - in Americas, PVC is being seen / perceived as the least re-cyclable and most environmentally harmful plastic. **To date, tile backing has been determined not by customer / specifier preference but by producer capability. That will change.**

A Supermarket of

Hard Backs

+

Soft Backs

OTHERS

- Beaulieu = ‘Nexterra’ (recycled plastic bottles)
- Milliken = ‘Comfort Plus’ PU Cushion Backing
- Shaw = ‘Ecoworx’ Thermoplastic Polyolefin
- Tandus = ‘Ethos’ PVB (recycled automotive glass)
- Ege = Nonwoven Textile Fleece

FEATURES INCLUDE

- ✶ Less Material / Lower Backing Weights (v Bitumen / PVC)
- ✶ Cushion Backing - noise reduction / thermal / underfoot comfort
- ✶ Higher Re-cycle Contents
- ✶ Improved Re-cyclability
- ✶ Total Re-cyclability
- ✶ Less Adhesive

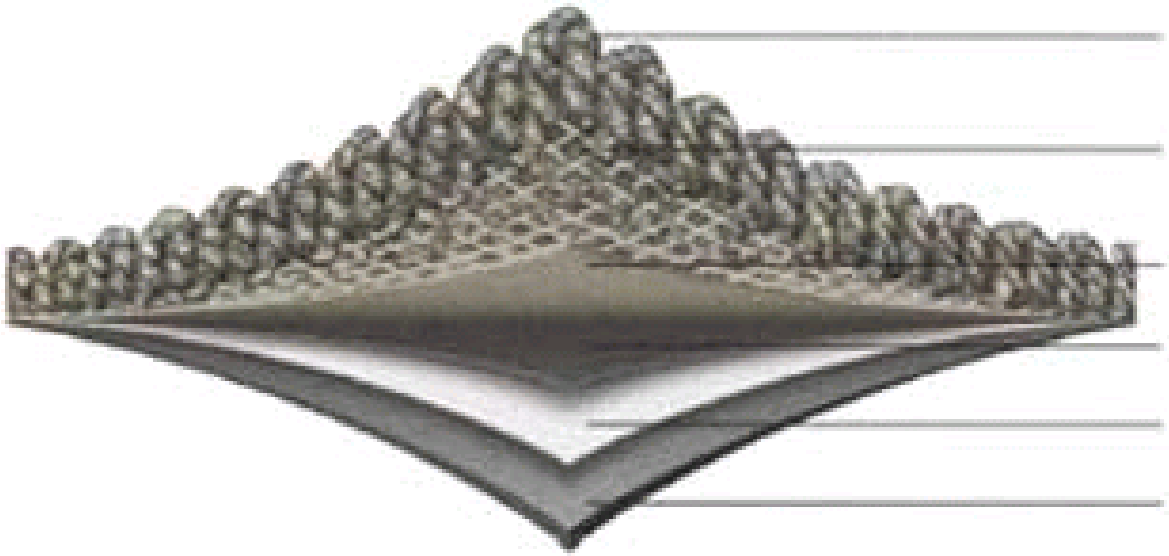
CRADLE TO CRADLE

IS NOT - “Eco-friendly - Cradle to Cradle - suitable for thermal disposal”

IS NOT - “Creating Products which can be deconstructed”

IS NOT - “Post Consumer Re-cycled % Content”

IS - “Creating **Products** which can be deconstructed and **Processes** which will **re-cycle to the original materials** - backing into backing, fibre into fibre - time after time”



face yarn

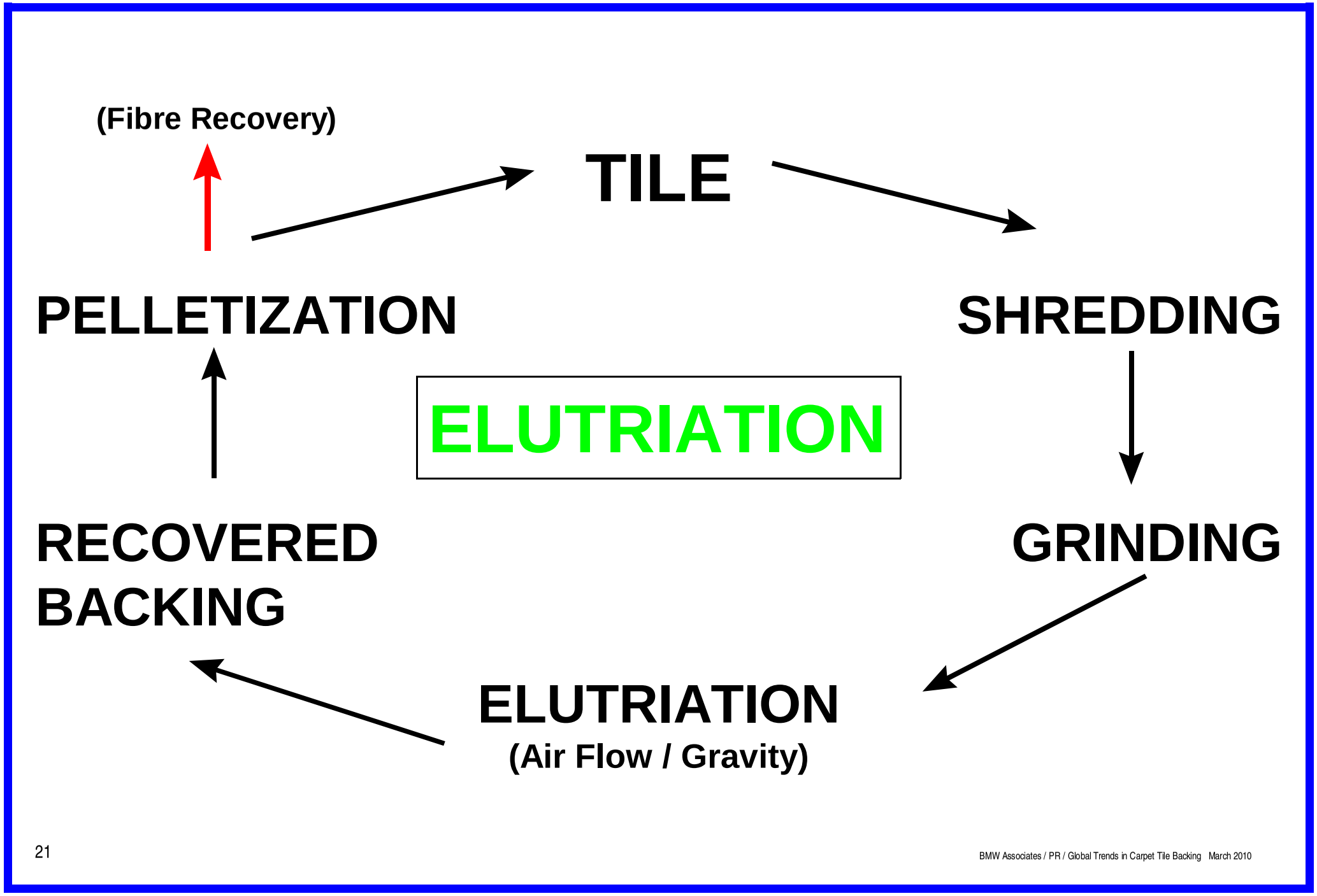
primary backing

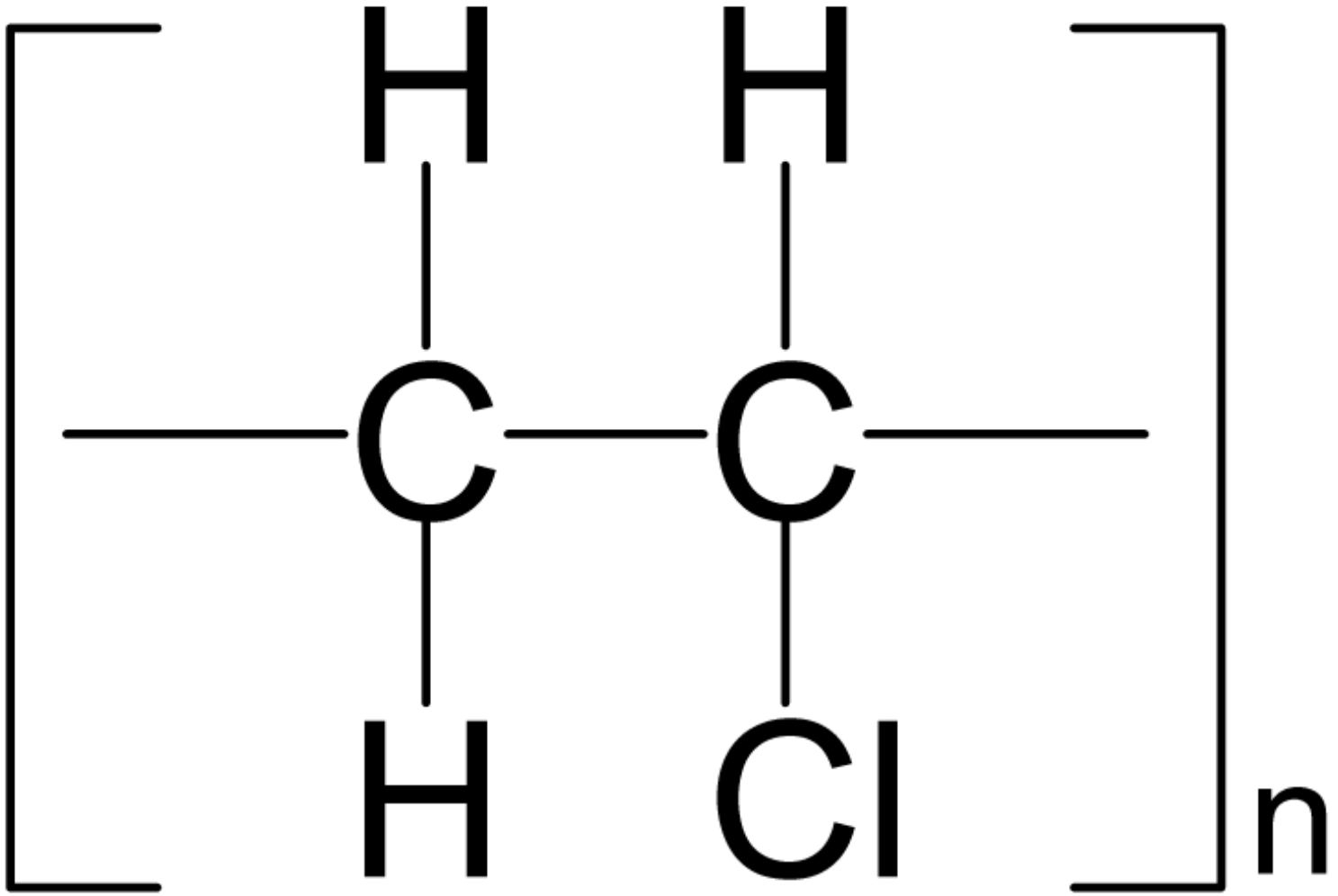
high performance pre-coat

thermoplastic compound

fiberglass reinforcement

thermoplastic compound


(Fibre Recovery)
TILE
PELLETIZATION
SHREDDING
ELUTRIATION
RECOVERED BACKING
GRINDING
ELUTRIATION
(Air Flow / Gravity)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RE-USE OF BITUMEN TILES (POST CONSUMER)

- Cleaning, Refurbishing, Re-Selling
- Grinding for use in Power Generation
- Separating Pile - into Carpet Tile Bitumen Process?
- Bitumen in Road Surfaces
- +

THE COMMERCIAL DILEMMA

USA (backing materials)

✷ Switch from PVC to Polyolefin (Cradle to Cradle) = **Cost Neutral**

EUROPE (backing materials)

✷ Switch from Bitumen to Polyolefin (Cradle to Cradle) = **+ £2 per sq metre**