

DRA's
ALL-FIBRE, ALL END-USES MARKET
FORECASTING SYSTEM

1. UNIQUE FIBRE MARKET MODEL

David Rigby Associates have developed a unique system for describing and forecasting the world market for textile fibres at the final end-use level. It is based on DRA's 20 years experience of consulting work on issues of strategy, marketing and technology in fibres, textiles and clothing. At the heart of the system is a database model of the world fibre market.
2. COVERING ALL END-USES FROM THE BOTTOM UP

The model covers all market sectors: garments, household textiles, furnishings, floor-coverings, technical textiles and nonwovens. It is flexible, in that it describes the market in terms of up to 300 different end-use products; the particular products used can be defined to match the needs of a particular decision-making situation. Global estimates and forecasts are made by aggregating upwards from projections for these individual end-uses.
3. AIMED AT DECISION-MAKERS THROUGHOUT THE SUPPLY CHAIN

The outputs from the model are aimed at helping the various types of businesses involved in the sector to make better strategic and tactical decisions. Target companies include producers and promoters of the following:

 - fibre precursors and intermediates
 - polymers
 - natural and man-made fibres
 - staple and filament yarns
 - consumer and technical textiles
 - process chemicals
 - effect chemicals
 - textile machinery.
4. A STRONG EMPHASIS ON INTERFIBRE AND INTERFABRIC COMPETITION

There is a strong emphasis in the model on describing the actual and potential competition among different fibres, fabrics and finishes within each end-use product. This is achieved by describing quantitatively the material content and structure of each end-use product in terms of the following variables, with significant regional variations being noted:

 - 20 different fibre types (e.g. cotton, polyester)
 - 8 different fibre/yarn forms (e.g. fibrefill, filament yarn)
 - 20 different fabric types (including various forms of woven, knitted, nonwoven and braided structures)
 - 4 types of fabric coating (including PU, PVC and rubber).

5. DESCRIBING TODAY'S MARKET...
- The model initially describes the current world market in terms of the volumes and values for each end-use product by country/region and calculates the implied volumes and values of the different fibres, yarns, fabrics etc. being consumed
6. AND FORECASTING FUTURE MARKETS.
- Forecasts of future markets are then made by two methods, used either separately or together:
- using forecasting equations based on external forecasts of key drivers of end-use consumption (e.g. GDP/head, industrial production, consumer spending)
 - making “what if” calculations on the effect of changes in background factors such as relative fibre prices, dressing habits, fire-retardancy regulations, fibre and textile processing technologies etc.
- In each case the implied volumes and values of fibres, fabrics etc being consumed are calculated. Future “scenarios” are constructed by combining the results obtained for different future years from the sets of “what-if” changes being explored.
7. THE FIBRE MARKET DESCRIPTIONS AND FORECASTS HAVE WIDE APPLICATION
- The model can be used to aid decision-making in a number of fibre market situations.
- Forecasting for a new fibre its potential sales volumes in different end-uses at different prices relative to those of incumbent competing fibres. New fibres investigated to date in DRA consulting projects include:
 - lyocell
 - PTT
 - PBT
 - PLA
 - elastomeric fibres
 - Optim Wool.

- Quantifying the likely future market prospects of established fibres (and their chemical intermediates) in competition with other fibres. Fibres investigated by DRA using the model include:
 - nylon (caprolactam, adipic acid, etc)
 - viscose (dissolving pulp)
 - acrylic (acrylonitrile)
 - polyester (pta, meg)
 - polypropylene (propylene).

- Producing DRA multiclient reports describing and forecasting major textile end-use sectors. The first of these is:
 - “Technical textiles and industrial nonwovens: world market forecasts to 2010” (June 2002)

8. THE MODEL IS
POWERED BY
LARGE
VOLUMES OF
REAL LIFE
DATA

The database used with the model comprises three parts:

- A set of “Product Sheets” (one for each defined end-use) giving details of material content and product structure in terms of the percentage breakdown by types, of fibre, yarn, fabric and finish and noting regional variations. Each sheet also contains details of any consumption statistics available from DRA research or published sources and the form of the driver-based forecasting equation used for the product in question.

- A library of forecasting variables: third-party time-series forecasts stretching as far ahead as possible for up to 210 individual countries for each of the driver variables used in the model’s forecasting system.

- A “Textile Knowledge Management System”: comprising a set of short, expert “essays” describing the key features of world fibre markets and supply chains and the important factors in determining current and future competition among different fibre types, fabric types and finishes. Essays are normally grouped under the headings: materials (e.g. fibres, fabrics), end-use products, markets, technologies, supply chains, legislation/standards, consumers, market drivers etc.

9. RESULTS FROM THE MODEL CAN CONTRIBUTE TO MANY TYPES OF DECISION

The model and its database can produce information to help improve decision-making in the following areas:

- planning capacity expansions and other capital investment projects.
- deciding targets, priorities and making cost-benefit analyses for research and development activities and technology acquisitions
- branding and promotion strategy
- pricing policies (short-and long-term)
- marketing and sales strategies
- for new fibres, identifying the most attractive target fabrics and end-use products and the best supply chain collaborators
- for mature fibres, identifying those end-uses which are under threat and those which have growth potential and defining appropriate defensive and aggressive action plans accordingly
- optimising supply chain strategies and relationships.

10. THE MODEL CAN BE USED TO ANSWER MANY SPECIFIC FIBRE MARKET QUESTIONS

These are some typical questions to which the model can be directly and simply applied.

- relative fibre prices: e.g. how will falling nylon prices affect the demand for polyester?
- launching new fibres: e.g. what sales could we expect by substituting for viscose in garments?
- fibre availability: which other fibres or fabric treatments will fill the gap if cotton production falls short of demand?
- consumer behaviour: e.g. what will be the effect on sales volumes for the different fibres if the trend towards casual dressing intensifies?
- advances in technology: e.g. what new end-uses could polypropylene penetrate, and to what extent, if it could be cheaply dyed in yarn and fabric form?
- new garments: e.g. what will be the effect on the demand for different fibres of continued strong growth in the market for seamless garments?
- economics: e.g. what will be the impact in demand for the different fibres if China's GDP grows by 50%?