



# Competing in the 21st century



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### **Acknowledgement:** Landell Mills Consulting

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## 1. Introduction

This report is the fifth in a series of UK Market Reports by The Packaging Federation, and takes as its theme on this occasion an updated assessment of the competitiveness study undertaken for the DTI in 2003 by PIRA with assistance from the PF. The main emphasis is on the proposed Action Plan from that study, with some recommended revisions. Thus, this report is aimed at the UK Government and especially the DTI, where support is seen as particularly lacking still.

In keeping with previous reports, some key data has been updated based on analyses by Landell Mills Consulting, the PF research partner, together with a contribution by their Managing Director, Dominic Cakebread on his perspective of the future competitive environment.

As in previous reports, the data and emphasis is on the *UK packaging manufacturing industry* as suppliers of empty packaging plus the trade balance in the supply of empty packaging. The data therefore excludes supplies to distributors and contract packer/fillers (which can duplicate the data) and imported filled packaging, which is growing annually as part of the UK packaging waste stream.

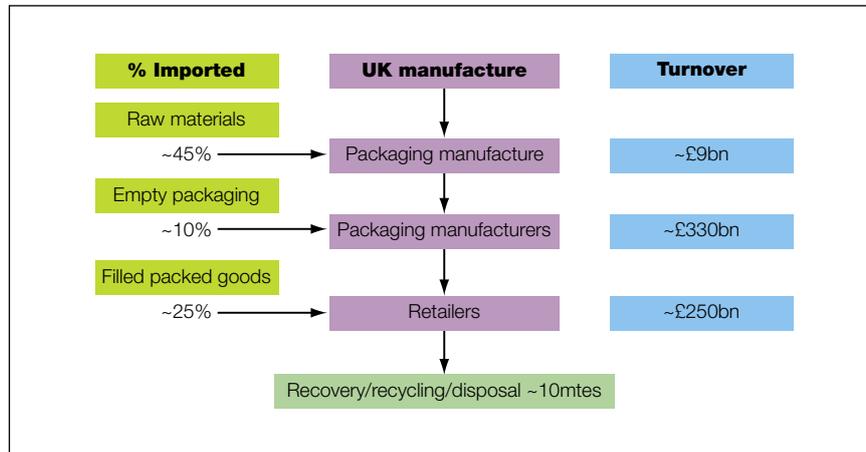


## 2. Profile of UK packaging 'industry'

### 2.1 Industry structure

- **Packaging is essentially a service industry, albeit a significant part of the UK manufacturing sector and UK economy.**

**Figure 1:** UK packaging supply chain 2004

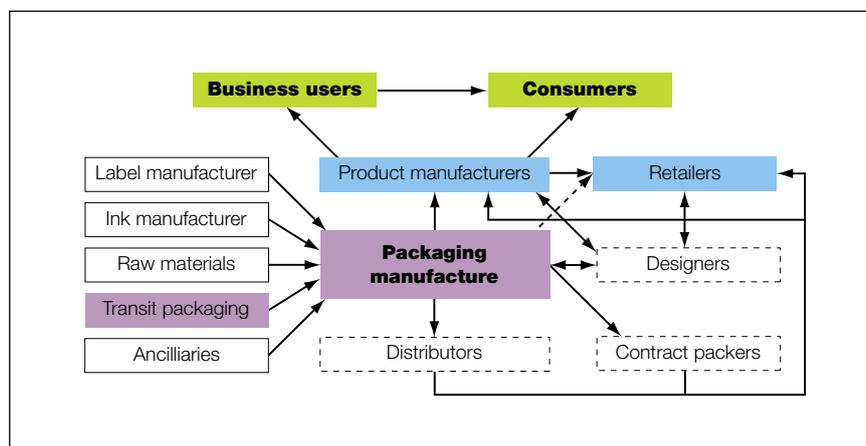


- **Packaging reflects our life-styles** in many ways:

- **The way we eat and drink** – at home, place of work, on the move, dining out or take-aways
- **The way we shop** – whether local store, supermarket or internet
- **The way we preserve our food and cook it** – the advent of fridges, freezers and microwaves have had a dramatic impact on the use of packaging
- **The way we live** – smaller households, higher expectations of health and safety, nutrition, more individual choice, fashion and more disposable income are all factors which influence the number and size of packed units and the associated volume and weight of packaging, which eventually ends up in the household waste stream
- **The way we conduct business** – packaging is a key element in driving business to business supply chains, whether that be moving products from manufacturers to supermarket shelves or moving printing inks from manufacturers to business users. Approximately 50% of packaging is used in this manner.

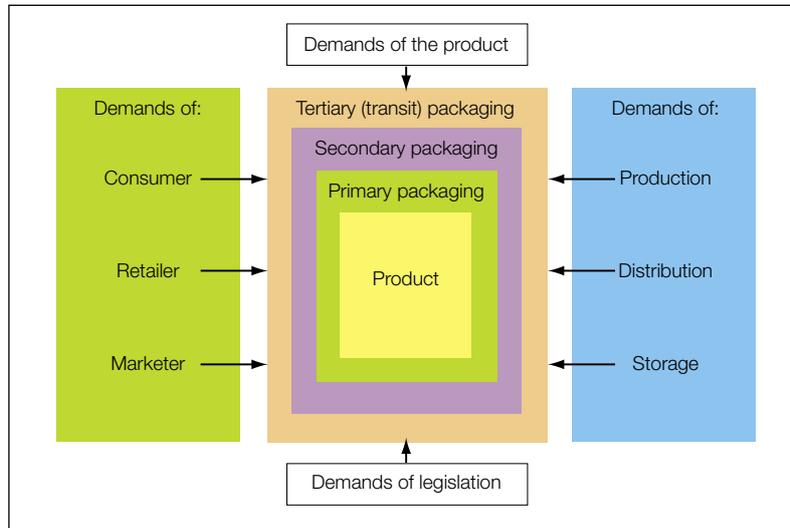
- **The packaging 'industry' is a complex mix of suppliers and users:**

**Figure 2**



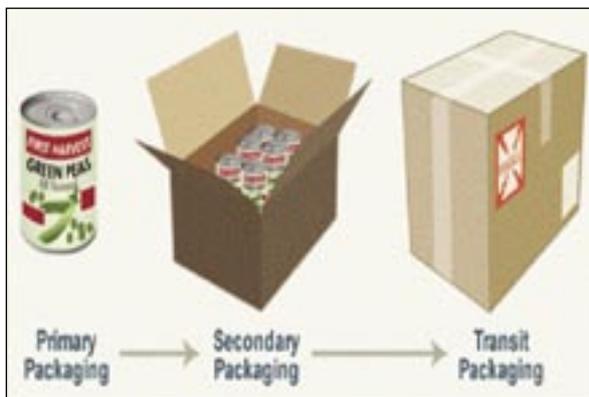
- The product manufacturer and their designers will place a number of demands on packaging suppliers dependant upon its use, e.g. food contact, child-resistant closure, which has to be matched with the production, labelling and material requirements. Legislative requirements, e.g. Packaging (Essential Requirements) Regulations, are increasing these demands also.

**Figure 3:** Functional demands on packaging



**Figure. 4** (below) Packaging system

**Figure. 5:** (right) Labelling requirements



Source: BBC

## 2.2 Key data on UK packaging manufacturing industry

### • Value

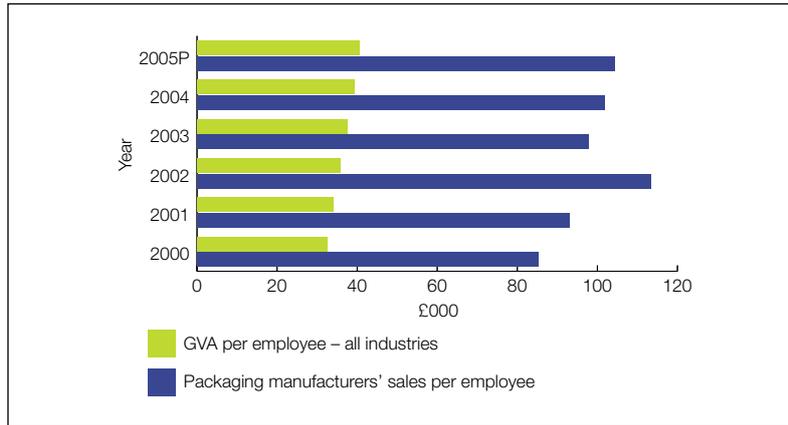
Turnover is now put at £9.6 billion in 2005, up from £9.3 billion in 2000, which represents an average growth rate of 0.6% p.a. versus UK GDP average of 5.1% over the same period. This reflects the increased pressure on prices in the sector, mainly from the major retailers, continued light-weighting resulting in reduced material usage, and decline of UK manufacturing as a customer base.

Packaging manufacturing turnover represents approximately 0.7% of total UK GDP and 5.5% manufacturing sector GDP.

### • Productivity

The sector continues to outperform all other industries in its productivity with GVA per employee more than 2.5 times that of all industries:

**Figure 6: Productivity**

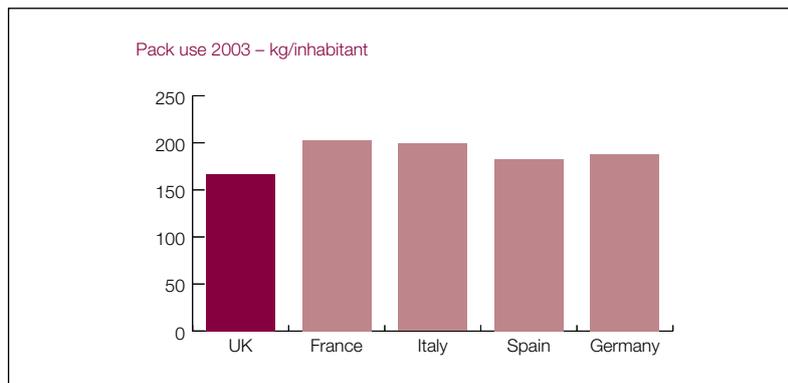


Source: Landell Mills Consulting estimates based on ONS data

**• Consumption**

UK packaging consumption at 167 kilos per person in 2003, was much lower than our major partners in the EU-15:

**Figure 7: Consumption**

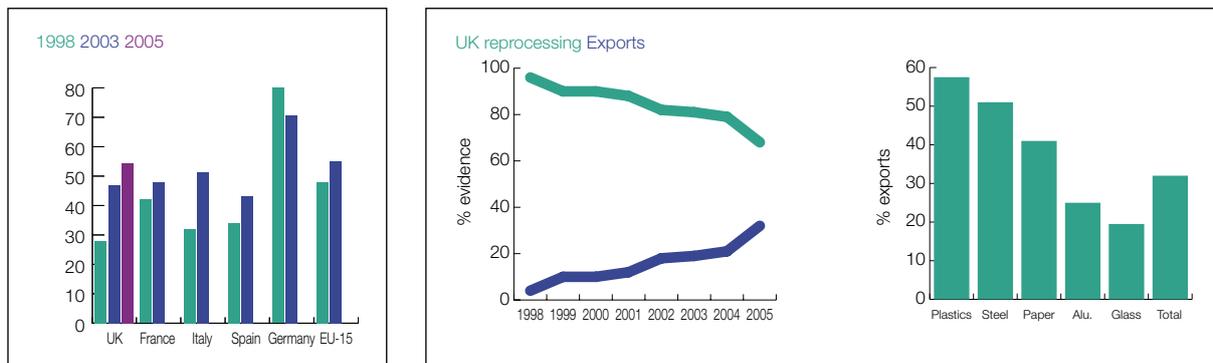


Source: DGENV

**• Recycling**

The UK continues to catch up with the major countries of EU-15 in packaging recycling. Germany is an anomaly due to its earlier start in the process and adoption of a dual kerb-side collection system (DSD), which proved much more costly than other systems in the EU. The UK's over-dependence on non-EU exports requires careful monitoring:

**Figure 8: EU-15 packaging recycling Fig. 9: UK export dependency 2005**

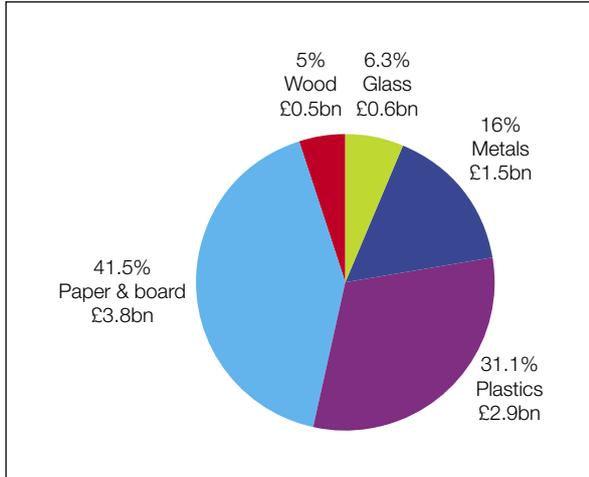


Sources: DGENV/DEFRA

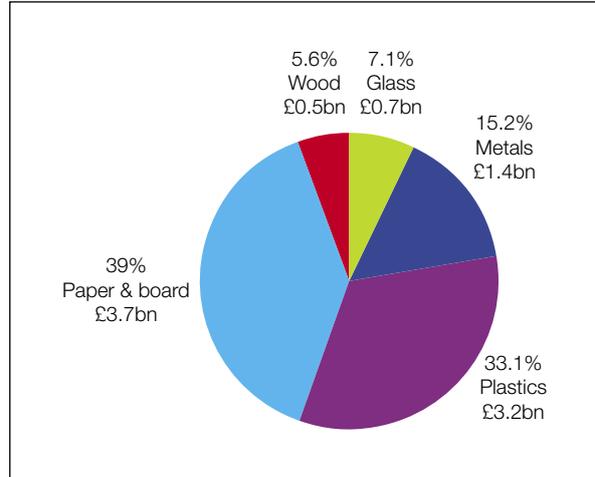
• **Materials**

Although paper & board is the largest sector for UK supply of empty packaging the gap with plastics is closing. Glass has shown some steady increase in the period 2000 – 2005, reflecting the fashion trend towards flavoured alcohol drinks in this period.

**Figure 10: UK packaging net supply 2000 – £9.3bn**



**Figure 11: UK packaging net supply 2005 – £9.6bn**

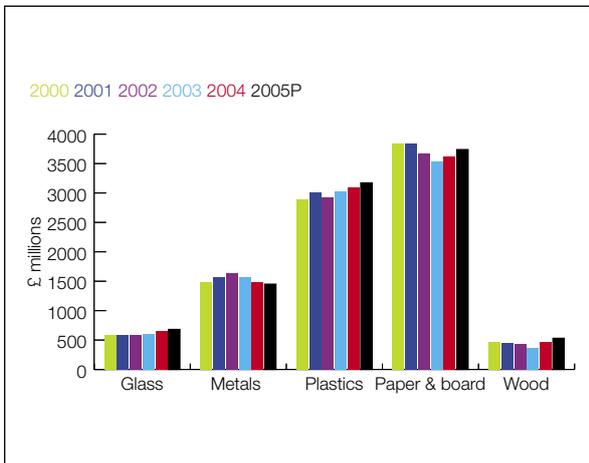


Source: Landell Mills Consulting based on ONS data

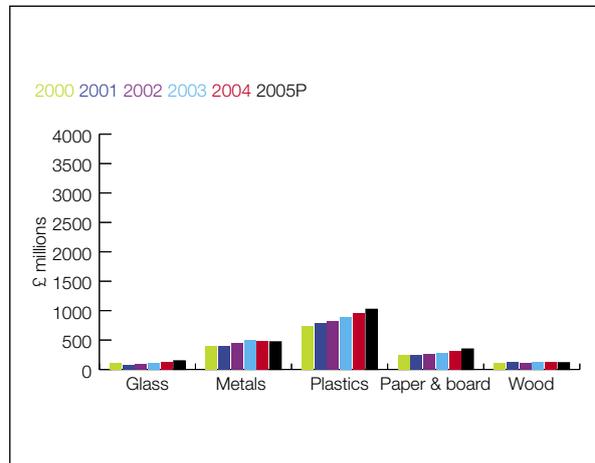
• **Trade balance**

Although the majority of packaging for the domestic market is supplied by UK packaging manufacturers, there is an increasing tendency to import plastics, metal and carton-board packaging. The value of imports for both plastics and metals has now increased from approximately 26% of net supply in 2000 to 32% in 2005:

**Figure 12: UK net supply – value**



**Figure 13: UK imports – value**



Source: Landell Mills Consulting based on ONS data

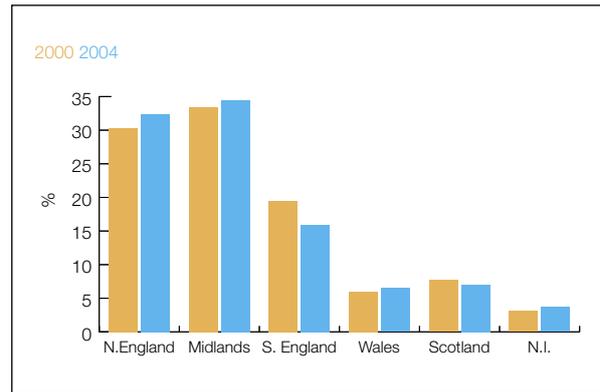
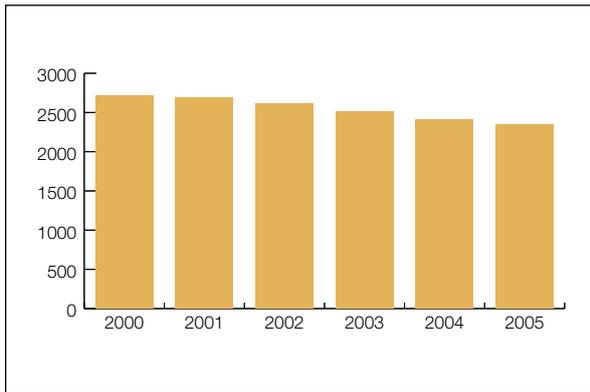
• **Employment**

The number of UK production sites engaged in packaging manufacture has declined by almost 15% between 2000 and 2005.

This has inevitably led to a decline in employment in the same period from over 103,000 to near 84,000 – a 19% decline, which mirrors the general decline in the UK manufacturing base.

However, this decline has not been uniform across the UK with the North and Midlands remaining strong but a significant decrease in Southern England.

**Figure 14:** UK packaging manufacturing production units **Figure 15:** UK regional employment



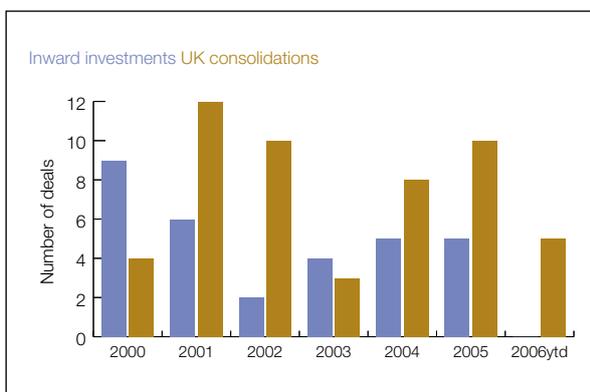
Source: Landell Mills Consulting

**• Mergers and acquisitions**

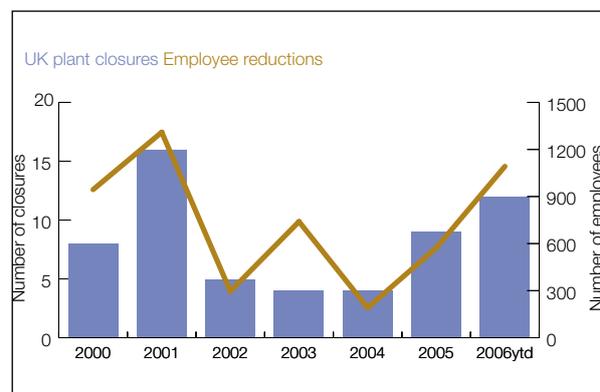
As shown in Annual Report no. 3, Figure 2, the degree of consolidation in the industry had some way to go. What is noticeable from the detailed data since that time is that:

- i. The under-valuation of the UK packaging sector in the FTSE during the late '90s attracted foreign investment as a base for Europe.
- ii. Following this trend came a period of UK capacity rationalisation a year later with knock-on effects on plant closures and employment.
- iii. Since 2004, the plant closures have been motivated more by a move to production outside of the UK by our major customer base rather than rationalisation of capacity within the UK.
- iv. The plant closures since 2004 represent 36% of the total since 2000 and 32% of the employee reduction.
- v. This trend is driven by packaging users, especially the larger brand owners in the food and consumer durables markets, taking advantage of the lower labour rates in the new Member States and Asia.
- vi. Whilst the scenario up to 2004 could be seen as a driver for improved productivity and increased competitiveness, the scenario since 2004 is symptomatic of a more general decline in UK competitiveness and a serious threat to a sustainable UK base.

**Figure 16:** UK M & As



**Figure 17:** Impact of M & As



Source: Landell Mills Consulting

### 3. Key Issues

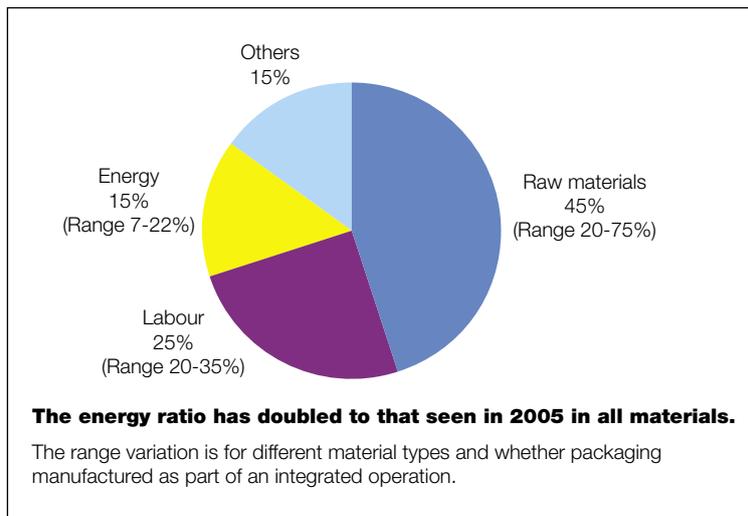
The following is an updated assessment of the key issues as they appeared in the previous competitive report – *Packaging in the 3rd Millennium* (Executive Summary) – available on the PF web-site at [www.packagingfedn.co.uk](http://www.packagingfedn.co.uk):

#### 3.1. Financial issues

**The issues which have become major, even to crisis point, are those relating to raw materials and energy costs. Whilst these are common to all manufacturing sectors, the impact on the UK packaging manufacturing sector is more severe due to:**

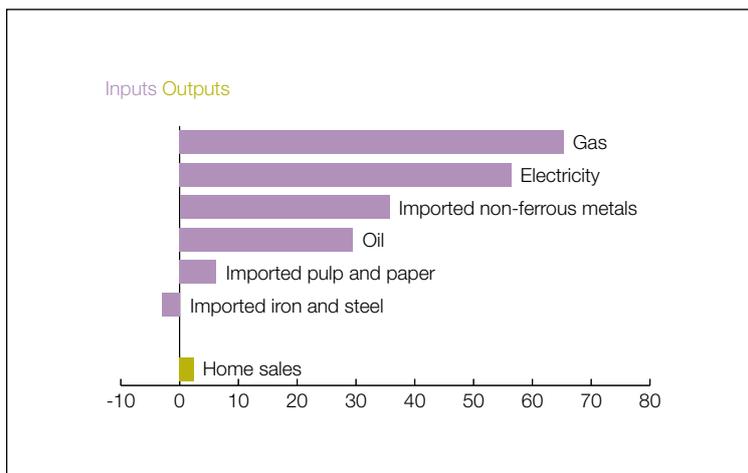
**i. The contribution that energy and raw materials make to the overall cost matrix, i.e. average 60%.**

**Fig. 18:** UK packaging manufacturing cost matrix – average 2006



**ii. The relative weak position in the supply chain which makes the passing on of these costs difficult and thus reduces the already slim margins as shown below:**

**Figure 19:** Manufacturing costs, % change 2005-06



Source: ONS

**iii. The ability for competitors outside of the UK, in the EU and especially in Asia, to obtain their raw materials and energy at lower costs, thus driving investment outside of the UK.**

### 3.2. Industry issues

The comments and predictions on over-capacity and foreign ownership have come to pass, as demonstrated by Figs. 16 & 17. The question of economic sustainability for such an important element of the UK food supply chain needs to be seriously addressed between Government and industry.

The other issues are addressed in the Action Plan (Section 5).

### 3.3. Customer issues

The questions of customer convenience and innovation are constantly being addressed, and highlighted in its many guises in the PF Market Report no. 4.

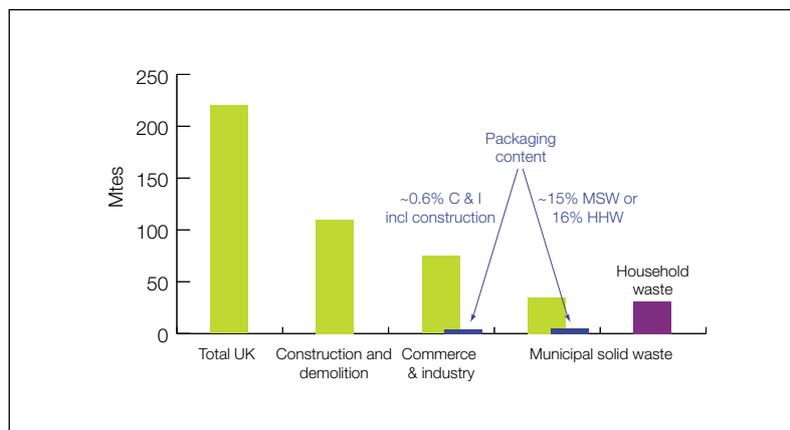
The issue of globalisation has also been referred to elsewhere in this report. With it comes both threats and opportunities, but the Government should be working with the sector to ensure that the threats are reduced or managed carefully, whilst the opportunities are maximised.

### 3.4. Environmental issues

The image of packaging as a benefit to sustainable development in terms of efficient use of resources and protector of product resources rather than an end-of-pipeline waste burden is a continuing challenge. This will be addressed in the Action Plan.

There is always a need to keep the issue of packaging waste in perspective whilst not demeaning the efforts and benefits to be gained from recycling – mainly achieved by the packaging manufacturing industry itself:

**Figure 20:** UK waste composition 2002



Source: DEFRA

The regulatory burden, as always, is being managed by the industry in the most cost-efficient manner. However, the uneven application of the UK's Climate Change Levy and ability to manage the EU carbon emissions trading scheme still gives cause for concern. Whilst the objective is laudable and supported, the mechanisms to achieve those objectives are seriously questioned, especially where the financial institutions appear to be gaining substantial benefit from the trading in carbon – and consequently energy resources.

## 4. Commentary by Landell Mills Consulting

It is a well-established (if perhaps not widely known) fact that the packaging market acts like a barometer of the economy, averaging about 1% of GDP across the European Union and in many countries worldwide, irrespective of the actual size and level of development of an individual country's economy.

### Globalisation

In recent years the term 'globalisation' has largely been used in the context of the growth in the large emerging economies in Asia (China and India especially), Eastern Europe and also some parts of Central and Southern America and Africa.

However whilst the term is relatively new, the process itself is not; the restructuring of the packaging industry carried out in the mid-1980's and early 1990's is probably better described as 'Europeanisation', this was the start of the recent trend which gradually but relentlessly gained in size, reach and pace.

As demand in most developed western European and North American packaging markets remains for the most part flat, this has led to downward pressure on pricing, overcapacity, intensification of competition and a greater proliferation of brands, products, packaging types, shapes and sizes as the fight for market share becomes more intense. Add to this increasingly tight environmental legislation and evermore stringent recycling targets and it is clear why virtually all major international packaging groups, have turned their focus away from the western developed countries to the lesser-developed, but faster-growing emerging markets, which are generally less regulated and offer better medium and long term growth prospects.

### Industry consolidation and rationalisation

The forces of globalisation have also led to a general polarisation of the UK packaging industry, which is now largely made up of three key tiers:

1. The large global players head-quartered in the UK (e.g. Rexam)
2. Subsidiary operations of large international packaging players (e.g. SCA, Tetra Pak) headquarterd outside of the UK. Some of these companies retain production facilities within the UK, some act solely in a sales/service/distribution capacity
3. A large number of small independent niche players, new start-ups, MBOs, sales agents and importers usually focused primarily on the serving the domestic UK market

There has been an overall decline in UK packaging manufacture and employment over the last few years in favour of lower labour cost locations, in eastern Europe and Asia in particular.

### Technical innovation

With static product demand, greater fragmentation and intensified competition in the product markets, these factors have in turn had a direct impact on packaging design and technology, leading for example to:

- The growth in smaller, single-portion packs
- More user-convenient packs and features (such as easy-open-ends, stand-up pouches, re-sealable packs, multi-compartmented trays with utensils included, dispensing drinks closures)



*Dominic Cakebread is Managing Director of Landell Mills Consulting (formerly Marketpower Limited), an independent marketing research and consulting organisation, specialising in international food and packaging markets.*

- More packs and products aimed at 'on-the-go' consumption and the lunchbox market
- More individualisation of packaging and brand design to enhance brand stand-out and improve customer loyalty
- Need for greater flexibility of shape and size
- Shorter run lengths for promotional and individualised packs
- Increased interest in packs optimised for separation and recycling refilling and returning

The development of RFID systems is likely to be one of the largest generic changes in packaging technology over the next 10 years, affecting all aspects of the packaging supply chain.

### **Opportunities for growth**

Looking to the future, it is clear that UK packaging manufacturers must continue to develop beyond the domestic market both for stronger volume growth and lower cost production.

Globally China and India are expected to be the two countries of greatest volume change. Already many of the larger packaging groups (e.g. Tetra Pak) have seen substantial growth in their Chinese sales and, with per capita demand still way below western standards, there is substantial room for further rapid expansion in future years.

Within the EU, strongest growth over the next few years is expected to come from the 10 new Member States where per capita packaging expenditure currently only averages €72 per annum compared with €265 for the former 15 countries and GDP growth is currently considerably stronger (8% per annum over the next two years, according to the World Bank). Our recent surveys in these countries have also shown an increasing 'westernisation' with many of the key drivers that started in western Europe over a decade ago (e.g. increase in working women, declining birth rates and trends toward healthier food consumption and more convenience packaging), now prevalent in countries such as Lithuania, Latvia, Poland, Hungary and the Czech Republic.

This suggests that the centre of gravity in Europe will again move further east with the largest European packaging market, Germany, increasingly taking on a pivotal role. Though the UK market is geographically less favourably positioned in this respect, we expect that many UK producers will start to develop stronger relationships and joint ventures with companies based in these countries to enable them to approach the European market from both sides.

In the longer run the UK packaging market, like many of its western counterparts, may become increasingly service-focused, concentrating as much on local delivery, customer support, contract packaging, research, design and new product development as on product manufacturing. Above all UK packaging producers need to remain in close contact with their customers, to adapt and adjust to the changing market conditions and tap into the growth prospects; for ultimately it is the consumer and the product that determines the packaging demand, not the other way around.

## 5. Action Plan review

As with the Key Issues section, the following is an updated assessment of the Action Plan as it appeared in the previous competitive report – *Packaging in the 3rd Millennium* (Executive Summary).

<b>Activity</b>	<b>Proposed action</b>	<b>Action to date</b>	<b>Review recommendations</b>
<b>i. Regulatory</b> Call for more 'joined up' thinking and review of UK CCL and IPPC implementation in particular.	Government in consultation with industry/ Trade Associations (TAs).	Revision to UK CCL to allow energy threshold limit combined with export quotient for lower energy users such as plastics.	<b>Monitor contribution to CCL from paper/ glass and metal sectors.</b>  <b>Monitor impact of EU ETS and NAPs on UK competitiveness.</b>
<b>ii. Employment</b> Monitor 'Print 21' (DTI Industry Forum) study on recruiting process for similar campaign.	Industry supported by Government.	As no Industry Forum established with DTI, no campaign to date. Sector Skills Councils (SMMT) includes packaging.	<b>Identify sector skill requirements more clearly.</b>
<b>iii. Image</b> Examples cited of French Packaging Council study on minimisation examples and Packforsk communications exercises.	Suggested 'image' survey to evaluate extent of problem and to recommend best practice for tackling issue. Industry supported by Government.	No survey with DTI, but PF actions: i. Report: <i>Packaging's Place in Society</i> ii. 'Drop-in clinics' for MPs iii. 'Packed to Perfection' flyers with retailers.	<b>Continue to offer open platforms for debate with MPs and produce reports and studies with supply chain.</b>  <b>Engage DTI support if possible.</b>
<b>iv. SMEs</b> Need to help SMEs in terms of technical assistance, access to funding, assistance with IT strategies, etc.	Government funded programme directed towards SMEs.	Limited feed-back on successful interface with MAS (Manufacturing Advisory Service), RDAs (Regional Development Agencies) or Business Links.	<b>Liaison with RDAs to promote packaging manufacture as a recognised priority sector.</b>
<b>v. E-auctions</b> Need for code of practice.	Industry and TAs on EU scale	Code of practice by EU flexible packaging and carton-board associations.	<b>Practice becoming more reasonable and less abused. Keep watching brief.</b>
<b>vi. R &amp; D</b> Relatively little – more collaboration with Faraday Packaging Partnership (FPP).	Engage co-operation of TAs and Government to continue funding FPP initiative.	FPP supported by DTI to become integrated into KTN (Knowledge Transfer Network) structure.	<b>PF to actively engage with new KTN as member of Management Board.</b>

<p><b>vii. Representation</b></p> <p>i. DTI to offer a ‘packaging champion’ as single point of contact.</p> <p>ii. Closer relationships between trade associations to improve representation to Government.</p>	<p>i. DTI business support unit</p> <p>ii. TAs</p>	<p>i. None</p> <p>ii. PF joined by Affiliate structure representing all major materials and sectors.</p>	<p><b>i. Continue to lobby for improved interface/ packaging ‘champion’.</b></p> <p><b>ii. Completed.</b></p>
<p><b>viii. IT/e-commerce</b></p> <p>PwC study – need for Government to communicate study recommendations and provide assistance where required especially to SMEs.</p>	<p>Government/ TAs.</p>	<p>None</p>	<p><b>i. Review e-commerce strategy with DTI.</b></p> <p><b>ii. Liaise with DTI for packaging manufacturers’ involvement with RFID retail strategy.</b></p>
<p><b>ix. Data</b></p> <p>Need for better data and benchmark future developments. Need for better definitions within existing SIC codes.</p>	<p>TAs &amp; Government.</p>	<p>PF &amp; Affiliates continued to work with DEFRA on analysis of packaging waste data.</p>	<p><b>PF &amp; Affiliates to continue to monitor and report on market statistics (as with this report).</b></p>
<p><b>x. Customer service opportunities</b></p> <p>Continued need for appreciation of downstream supply chain requirements to provide competitive advantage through targeted product and service innovation.</p>	<p>Industry.</p>	<p>Innovation has been main driver for major packaging suppliers.</p> <p>Some examples given in PF UK Market Report no. 4.</p>	<p><b>Costs will continue to be the main driver for innovation.</b></p>
<p><b>xi. Supply chain improvement and exploitation</b></p> <p>Adoption of lean manufacturing techniques recommended with reference to ‘Print 21’ study.</p> <p>Need to keep abreast of new technologies, e.g. RFID, active/ intelligent formats etc.</p>	<p>Industry.</p>	<p>i. PICME and MICE as DTI sponsored bodies have included some packaging manufacturers in their lean manufacturing programmes.</p> <p>ii. PF formed a Packaging RFID Work Group with supply chain partners.</p>	<p><b>i. Continue to liaise with DTI sponsored bodies for opportunities.</b></p> <p><b>ii. Continue to work with retailers and brand owners on implementation of RFID and other new technologies.</b></p> <p><b>iii. Work with retailers on SRP (shelf-ready packaging).</b></p>
<p><b>xii. Sustainable Development</b></p> <p>Consideration for sector sustainable development strategy.</p>	<p>Industry; Government to continue to fund Pioneers Group.</p>	<p>DTI terminated Pioneers Group initiative.</p>	<p><b>Focus on DEFRA Sustainable Production and Consumption Indicators with ref. to packaging.</b></p>

<b>xiii. Benchmarking</b> Further work to benchmark UK industry over range of key performance indicators.	TAs, Industry	No further work.	<b>Consider further analysis and value.</b>
<b>xiv. Industry Forum</b> Consolidate and address all actions under an Industry Forum, whilst recognising need not to duplicate other IFs.	Industry, TAs and Government.	DTI terminated any further sponsorship of IFs.	<b>Review success of IFs for further consideration with DTI.</b>

**Conclusions:**

- It is very obvious from comments below that lack of DTI support to provide a vehicle for an Industry Forum or any dedicated business support to the sector, despite its size and importance has resulted in little if any visible follow-up action by DTI.
- The sector will – and should – continue to manage its own affairs and regulatory requirements, with or without DTI support; but seriously questions the relevance of this Department if the reduced funding and organisation does not provide the adequate resources to add value to the manufacturing industry.
- Urgent need for DTI to recognise importance of sector and assist with:
  - i. Ensuring energy supply and pricing structure not placing sector at competitive disadvantage.
  - ii. Ensuring obligations on climate change cost-effective and not ‘gold-plated’, placing UK at competitive disadvantage.
  - iii. Identify ‘packaging champion’ to work with and better understand the sector to provide advice on investment and R & D opportunities with the various UK and EU Government programmes.
  - iv. ‘Champion’ to ensure packaging manufacturing sector included in any DTI activity on innovation and technology where packed products likely to be affected, e.g. RFID in Retail.
  - v. To work with industry to develop a 10 year business plan to examine the threats and opportunities for a sustainable UK manufacturing sector, especially for the food supply chain.
- Urgent need for Government to strengthen Manufacturing Forum to ensure that UK manufacturing does not fall any further behind our major competitors in the world, especially with the advent of China and India on the global stage:

**Figure 21:** Manufacturing output (GVA)



Source: Unido

## 6. Packaging Federation Highlights – 2005-06

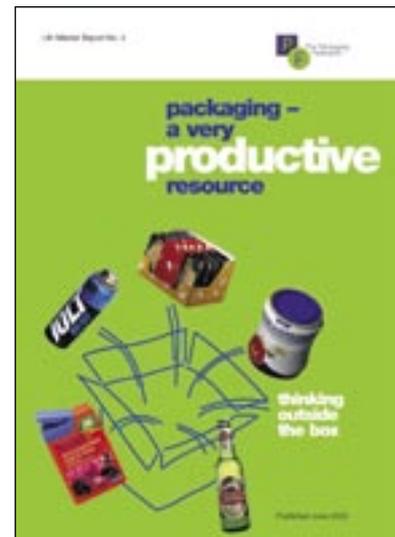
- Major new initiative working with the Advisory Committee on Packaging to manage the financial and legal aspects of developing a national electronic data system for UK Packaging Regulations to enhance data collection and more effective monitoring of system.



- With PF Affiliates launched new 'drop-in clinic' in House of Commons for MPs to meet with industry over packaging issues. Intention is to review and expand service to Scottish Parliament and County Councils.

- On the Regulatory front between June 2005 and July 2006 no less than 10 UK consultations affecting the sector were responded to covering further amendments to the UK Packaging Regulations (two consultations), Energy Strategy, Waste Strategies (two – England and Scotland), Carrier bag tax Scotland, Supermarket Code of Practice with Suppliers (OFT and Competition Commission), Weights & Measures – and Better Regulations!

- Publication of UK Market Report no. 4: *Packaging – A Very Productive Resource* focusing on innovations.
- From developments in the EU, the EU Chemicals Policy, viz. REACH, was monitored closely together with discussions in the supply chain on preparations for implementation in 2007.
- Support to WRAP (Waste Resources and Action Programme) – a Government organisation- to develop recycling infrastructure and recycled products markets, especially on the Retailer Household Food and Packaging Waste initiatives.
- Active support to Faraday Packaging Partnership for transition into the DTI KTN (Knowledge Transfer Network) programme, which encourages greater collaboration between academia and industry.



- Packaging RFID (Radio Frequency Identification – or radio bar codes) Work Group established with supply chain to monitor implementation especially at unit level in grocery supply chains. Publication of simple user guide.

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